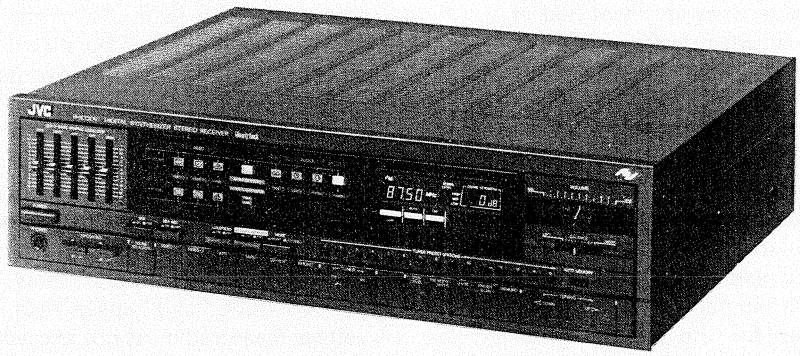
JVC

SERVICE MANUAL

STEREO RECEIVER

MODEL R-X330VB/R-X330VLB



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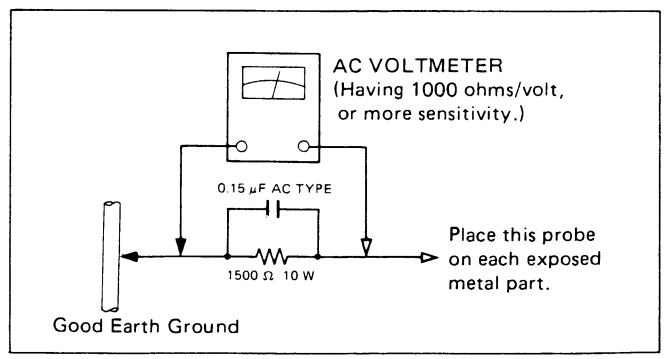
This manual combines two single volumes; Service manual and Parts list.

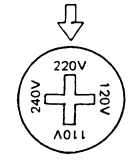
No. 2822
Feb. 1985

Safety Precautions

1. The design of this product contains special hardware, many circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list in Service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and/or the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.
   When service is required, the original lead routing and dress should be observed, and they should be confirmed to be returned to normal, after re-assembling.
5. To confirm the polarity of the power cord and AC outlet.
   When replacing the power cord or the AC outlet, make sure that the power switch or the protection device (the primary fuse etc.) is NOT connected to the ground power side of the plug and AC outlet (wider blade of plug or wider hole of the AC outlet).
6. Leakage current check
   (Safety for electrical shock hazard)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the Products (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method.
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



CHECKING YOUR LINE VOLTAGE (Except for U.S.A., Canada, Australia, U.K. and Continental Europe.)
Before inserting the power plug, please check this setting to see that it corresponds with the line voltage in your area. If it doesn't, be sure to adjust the voltage selector switch to the proper setting before operating this equipment. The voltage selector switch is located on the rear panel.



CAUTION Before selecting the "Voltage selector switch" to proper voltage disconnect the power plug.

1. Specifications

AMPLIFIER SECTION

RMS Power : **55 watts per channel, min. RMS, both channels driven, into 8 ohms from 20 Hz to 20 kHz, with no more than 0.03 % total harmonic distortion.**

60 watts per channel, min. RMS, both channels driven, into 8 ohms from 40 Hz to 20 kHz, with no more than 0.2 % total harmonic distortion.

58 watts per channel, min. RMS, both channels driven, into 8 ohms at 1 kHz with no more than 0.01 % total harmonic distortion.

60 watts per channel, min. RMS, both channels driven, into 8 ohms at 1 kHz with no more than 0.7 % total harmonic distortion.

Total Harmonic Distortion	:	0.01 % at 58 watts (1 kHz, 8 ohms)
Intermodulation Distortion	:	0.03 % at 55 watts
Damping Factor	:	40 at 8 ohms, 1 kHz
Input Sensitivity/Impedance		
PHONO	:	2.5 mV/47 kohms
TAPE PLAY, VTR: PLAY CD/AUX VIDEO-1/-2		190 mV/40 kohms
Recording Output Level	:	190 mV
Frequency Response		
PHONO (RIAA Equalization)	:	20 Hz – 20 kHz, +1 dB, –1 dB
TAPE PLAY, VTR PLAY CD/AUX VIDEO-1/-2	:	5 Hz – 50 kHz, +0 dB, –1 dB
S.E.A. Graphic Equalizer		
Center frequencies	:	63 Hz, 250 Hz, 1 kHz, 4 kHz, 16 kHz
Control range	:	+12 dB ±1 dB, –12 dB ±1 dB
Loudness Control (Volume control at –30 dB position)	:	+6 dB at 100 Hz +4 dB at 10 kHz
Signal to Noise Ratio		
PHONO	:	71 dB ('66 IHF) 66 dB (DIN) 78 dB ('78 IHF, Rec out)
TAPE PLAY, VTR: PLAY CD/AUX VIDEO-1/-2		100 dB ('66 IHF) 67 dB (DIN) 77 dB ('78 IHF)

VIDEO SECTION

Output Signal Level (VTR OUT)	:	1 Vp-p (at 1 Vp-p input)
Impedance	:	75 ohms unbalanced
Synchronization	:	Negative
S/N	:	45 dB
Crosstalk	:	45 dB (3.58 MHz)

FM TUNER SECTION

		'78 IHF	DIN (for Europe)
Tuning Range	:	87.9 MHz–107.9 MHz	87.5 MHz–108.0 MHz
Usable Sensitivity	:	Mono 10.3 dBf (0.9 μV/75 ohms) (1.8 μV/300 ohms)	(S/N 26 dB) 1 μV/75 ohms 2 μV/300 ohms
50 dB Quieting sensitivity	:	Mono 14.8 dBf (1.5 μV/75 ohms) (3.0 μV/300 ohms) Stereo 38.3 dBf (22.5 μV/75 ohms) (45 μV/300 ohms)	
S/N 46 dB Stereo Sensitivity	:	— —	Stereo 23 μV/75 ohms
Signal to Noise Ratio (at 98 MHz, 80 dBf)	:	Mono 82 dB Stereo 73 dB (A-net.)	Mono 74 dB Stereo 65 dB (weighted)
Total Harmonic Distortion 1 kHz	:	Mono 0.08 % Stereo 0.15 %	Mono 0.1 % Stereo 0.3 %
Frequency Response	:	30 Hz – 15 kHz, +0.5 dB, –3 dB	
Capture Ratio	:	1.5 dB	1.0 dB
Alternate Channel Selectivity	:	60 dB, ±400 kHz	55 dB, ±300 kHz
Image Response Ratio	:	56 dB at 98 MHz	
IF Response Ratio	:	85 dB at 98 MHz	
Stereo Separation	:	45 dB at 1 kHz	40 dB at 1 kHz

AM TUNER SECTION

MW		'78 IHF	DIN (for Europe)
Tuning Range			
Channel space 9 kHz	:	522 kHz–1611kHz	522 kHz–1611 kHz
Channel space 10 kHz	:	530 kHz–1710 kHz	
Sensitivity	:	250 μV/m at 1000 kHz 30 μV at 1000 kHz	250 μV/m at 999 kHz 30 μV at 999 kHz
Signal to Noise Ratio (100mV/m)	:	50 dB at 1000 kHz	50 dB at 999 kHz
Selectivity	:	38 dB, ±10 kHz at 1000 kHz	35 dB, ±9 kHz at 999 kHz
Image Response Ratio	:	40 dB at 1000 kHz	40 dB at 999 kHz
IF Response Ratio	:	55 dB	
Total Harmonic Distortion (100mV/m)	:	0.5 % at 1000 kHz	0.5 % at 999 kHz

LW (R-X330VLB only)

Tuning Range	:	144 kHz–353 kHz
Sensitivity	:	500 μV/m at 245 kHz 100 μV at 245 kHz
Signal to Noise Ratio (100mV/m)	:	45 dB at 245 kHz
Selectivity	:	40 dB, ±9 kHz at 245 kHz
Total Harmonic Distortion	:	0.5 % (100mV/m) at 245 kHz

Design and specifications subject to chcnge without notice.

Power Specifications

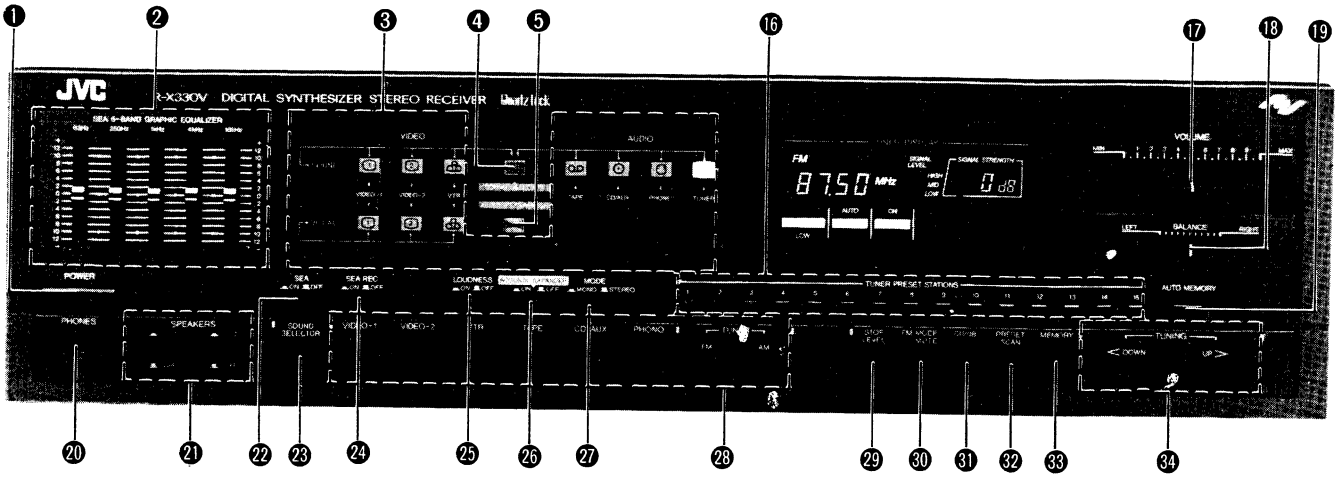
Areas	Line Voltage & Frequency	Power Consumption
U.S.A., Canada	AC 120 V, 60 Hz	250 watts, 310 VA
Continental Europe	AC 220 V~, 50 Hz	150 watts
U.K., Australia	AC 240 V~, 50 Hz	150 watts
Other Areas	AC 110/120/220/240 V~, Selectable, 50/60 Hz	180 watts

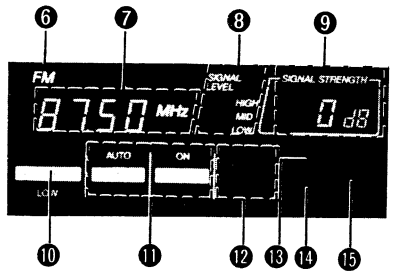
Dimensions and Weight

Dimensions			Weight
Height	Width	Depth	Net
117 mm (4-5/8")	435 mm (17-3/16")	339 mm (13-3/8")	7.0 kg (15.5 lbs)

2. Names of Parts and Their Functions

R-X330VB





❶ POWER switch
Press to turn the power on. To turn the power off, press this again.

Note:
- **An electronic source selector is used in this unit. When the POWER switch is first switched on, two or more sources or no source may be selected. Make sure to input the source select data by pressing one of the source selectors.**

❷ S.E.A. Graphic Equalizer system
These five controls allow you to boost or lower response separately in five bands of the frequency spectrum by 12 dB. For operation of these controls, which give far more flexible control over tone than the conventional bass/treble controls, see page 33.

❸ Pictorial source display
This lights according to the source selected.

❹ SOUND SELECTOR indicator
Lights when the SOUND SELECTOR switch is activated.

❺ ACOUSTIC EXPANDER indicator
Lights when the ACOUSTIC EXPANDER switch is pressed.

❻ FM/AM (MW/LW) indicator
FM is displayed during FM reception and AM for AM (MW LW): R-X330VLB only, MW is shown for MW and LW for LW.

❼ Frequency indicator
The tuned-in freuqency is displayed digitally. Four digits (kHz) are displayed during AM reception and five digits (MHz) (for Europe, U.K., Australia and other countries) or four digits (MHz) (for U.S.A. and Canada) are displayed during FM reception.

❽ SIGNAL LEVEL indicator
This is used in tuning to both FM and AM broadcasts. The signal strength is shown at three levels.

Note:
- **Three levels — low, mid and high, corresponding to the signal strength in dB as shown below.**

	LOW	MID	HIGH
FM	10 – 35 dB	40 – 55 dB	More than 60 dB
AM	40 – 65 dB	70 – 85 dB	More than 90 dB

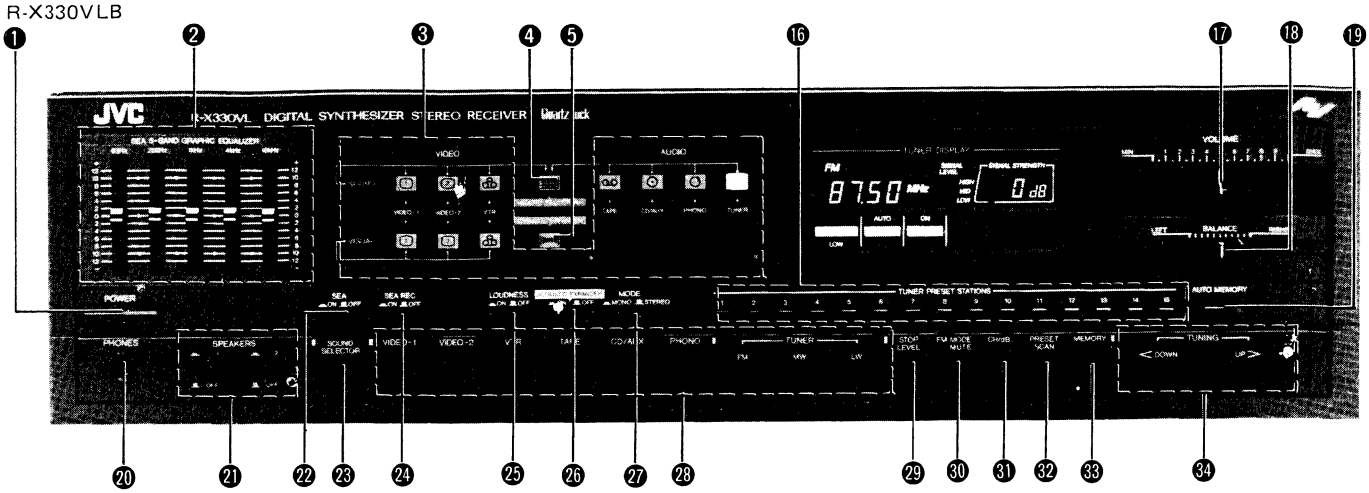
❾ SIGNAL STRENGTH/ TUNER PRESET indicator
This indicator doubles as the dB signal strength indicator and the tuner preset indicator to show the channel number of the preset station.
This indicator can be switched between the two display modes by pressing the CH/dB switch.

Notes:
- **0 dB corresponds to 1 μV/75 ohms in FM and 1 μV/m in AM.**
- **The indication is shown in 5 dB steps.**
- **The optimum signal strength is more than 40 dB for FM mono more than 60 dB for FM stereo and 70 dB for AM. If the signal is too weak or too strong, this display may not indicate the correct value.**
- **Even if the dB display mode is set by pressing the CH/dB switch, the CH indication is displayed and maintained when the station select buttons are pressed. When the TUNING button is pressed, the dB indication is displayed.**
- **If a broadcast is received by preset tuning and then the CH/dB switch is pressed so that the dB indication is displayed before switching the power off, the CH indication will be displayed when the power is switched on again.**

❿ STOP LEVEL indicator
This indicator shows HIGH or LOW according to the setting of the STOP LEVEL switch.

⓫ FM MODE/FM MUTE indicator
This indicator shows AUTO/ON or MONO/OFF according to the setting of the FM MODE/MUTE switch.

R-X330VLB



⑫ STEREO/QSC indicator

STEREO: When an FM stereo broadcast is being received, this indicator lights. When the MODE indicator shows MONO even if an FM stereo broadcast is received, this indicator will not light; press the FM MODE/MUTE switch so that AUTO is shown.

QSC: When a signal strength of an FM stereo broadcast is low, this indicator lights and the QSC (Quieting Slope Control) circuit is switched on to reduce noise.

Note:

- **Since the STEREO and QSC is automatically set according to the signal strength, if the signal strength changes, re-tune.**

⑬ AUTO MEMORY indicator

Lights when the AUTO MEMORY switch is activated.

⑭ MEMORY indicator

Lights for about 5 seconds when the MEMORY switch is activated or for 1 second when the frequency is stored in memory during auto memory.

⑮ PRESET SCAN indicator

Lights when the PRESET SCAN switch is activated.

⑯ Station select buttons

These buttons are used to select one of the preset stations or to store the frequency in the memory of an individual channel. When one of these buttons is pressed, the channel number is shown by the TUNER PRESET indicator.

if one of these buttons is pressed when the MEMORY switch is pressed in, the frequency which is being received will be stored in memory.

Each of the station select buttons can be used in common for one FM station and one AM station (one MW or LW station for R-X330VLB).

if you change the mode from radio reception to any other mode including power-off and back to radio reception, the station previously selected with the station select buttons is tuned to again.

⑰ VOLUME control

Slide to the right to increase the sound level.

⑱ BALANCE control

Use to adjust the balance between the left and right speakers.

⑲ AUTO MEMORY switch

Activate this switch to scan and preset broadcasts automatically. The dB indication is shown and the received frequency changes from the lower frequency limit. After this, if a broadcast is tuned in, its signal strength is shown in dB for 1 second and channel number 1 flickers for 3 seconds. If this broadcast is not required to be stored in memory, press this switch within 4 seconds; the dB indication is shown and auto memory function starts again. If not, the MEMORY indicator and channel number light together and its frequency is stored in the memory of channel number 1. Then the dB indication is shown again and upscanning restarts. The same function is performed for the remaining channels.

When the frequency reached to upper limit, the auto memory function stops and the channel number in which the highest frequency is stored in memory is shown, If there is no broadcast to be tuned to, the upper limit frequency is shown with dB displayed instead of the channel number. When all channel memories have frequencies stored in them, the last frequency is tuned to and its channel number is shown. During this operation, if any of the band switches is pressed, this function stops and the broadcast being heard is still received if its band is the same as that of the switch pressed while the last channel is tuned to if its band is different from the switch pressed.

Note:

- **Do not press the PRESET SCAN switch during auto memory for stable operation. Do not perform the auto memory function when the source selector is set to other than TUNER.**

⑳ Headphone jack (PHONES)

Plug stereo headphones into this jack for private listening and recording monitoring. See page 31. If you want to listen to sound from the headphones only, press the SPEAKERS switches to OFF.

㉑ SPEAKERS switches

SPEAKERS-1 switch

Press to switch the speakers connected to the SPEAKERS 1 terminals on or off.

SPEAKERS-2 switch

Press to switch the speakers connected to the SPEAKERS 2 terminals on or off.

㉒ SEA switch

DEFEAT (▬): To bypass the SEA circuit. Convenient for checking the SEA-compensated signal and for comparison with the uncompensated sound.

ON (▬): Use this position for normal SEA compensation.

㉓ **SOUND SELECTOR switch**
When the VIDEO signal of the VIDEO-1, VIDEO-2 or VTR is played back, if this switch is activated (the SOUND SELECTOR indicator ❹ is lit), at this time, VIDEO SOURCE is fixed to enable to have AUDIO SOURCE freely selected.
If pushed once more, sound selector is released, and afte that, returns to normal SOURCE SELECTOR.

㉔ **SEA REC switch**
Press to ON (▬) to record tapes with the added effect of the S.E.A. Graphic Equalizer. (See page 35.)

㉕ **LOUDNESS switch**
Press this switch to ON (▬) to compensate for the ear's lower sensitivity at low listening levels.

㉖ **ACOUSTIC EXPANDER switch**
This button is used to select ACOUSTIC EXPANDER which turns mono sound into believable stereo and stereo into incredible stereo.
Notes:
- **When ACOUSTIC EXPANDER is employed, first arrange both speakers to deliver sound as mentioned in ㉚ MODE switch, and then push ACOUSTIC EXPANDER switch.**
- **Sound of ACOUSTIC EXPANDER cannot be recorded on.**

㉗ **MODE switch**
STEREO (▬): To listen to stereo sound from a stereo source. Normally set this switch to this position.
MONO (▬): In this position, the left and right channel signals are mixed and reproduced from both speakers.

Note:
- **When the VTR connected is not a stereo model, press this switch to set to MONO (▬) to output the same sound from both speakers. Otherwise, sound will be output only from one speakers.**

㉘ **Source selector**
FM switch: Press to switch on the FM tuner section.
AM switch (for R-X330VB) MW switch (for R-X330VLB): Press to switch on the AM (MW) tuner section.
LW switch: Press to switch on the LW tuner section (for R-X330VLB)
PHONO switch: Press to listen to records on a turntable connected to the PHONO terminals.
CD/AUX switch: Press to listen to the CD/AUX connected to the CD/AUX terminals.
TAPE switch: Press to listen to the tape deck connected to the TAPE terminals.
VIDEO-1 switch: Press to watch and listen to the source connected to the VIDEO-1 terminals.
VIDEO-2 switch: Press to watch and listen to the source connected to the VIDEO-2 terminals.
VTR switch: Press to watch and listen to the VTR (Video Tape Recorder) deck connected to the VTR terminals.

㉙ **STOP LEVEL switch**
This is used to switch over the sensitivity of the receiver between high and low; this determines the strength of broadcast signals at which the scan tuning stops.
It is effective during the auto memory and auto tuning.

Note:
- **This stop level is related to the SIGNAL LEVEL indicator . The HIGH stop level corresponds to higher than MID level and the LOW stop level corresponds to LOW level.**

㉚ **FM MODE/MUTE switch**
Press this switch so that AUTO of FM MODE and ON of FM MUTE light in the display for normal FM reception for automatic elimination of interstation noise.
When receiving a weak or noisy FM stereo broadcast, press this switch so that MONO of FM MODE and OFF of FM MUTE in the display light; the broadcast will be heard in mono but the clarity of reception will be improved.

㉛ **CH/dB switch**
Activate to select the channel indication or dB indication. If one of the station select buttons is not pressed beforehand, only the dB indication is shown and this switch has no effect.
During auto memory and preset scanning, this switch does not work.

㉜ **PRESET SCAN switch**
This switch permits the scanning of the preset stations. When this switch is activated, the PRESET SCAN indicator lights and channel 1 is tuned in then this channel number flashes for about 5 seconds. The following channels are shown in the same way. When the desired station is received, pressing this switch stops scanning so the R-X330VB/R-X330VLB remains tuned to the station. After 15 stations (each for the FM and AM bands) have been scanned, the frequency received originally before preset scanning is tuned to.

㉝ **MEMORY switch**
Activate this switch and the MEMORY indicator will light to show that it is ready to receive a memory setting. Pressing the station select button while the MEMORY indicator is lit (for about 5 seconds) makes it possible to store the station in the specified memory. At this time, the channel number is shown in the display.

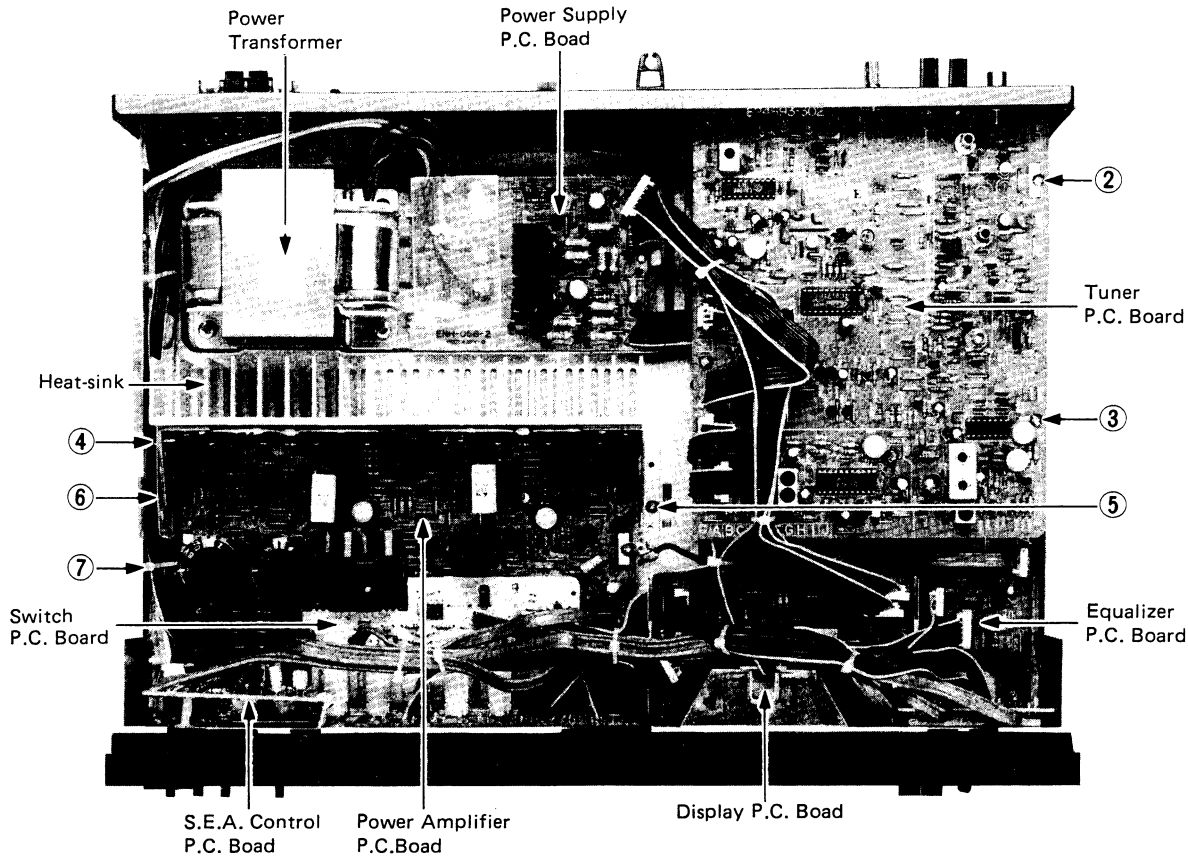
㉞ **TUNING UP/DOWN button**
When this button is pressed, the dB indication is shown.
DOWN: Press to tune to lower frequencies.
UP: Press to tune to higher frequencies.

Manual tuning
Tapping these sides changes the frequency in single steps of 9 or 10 kHz in AM (MW), 50 or 100 kHz in FM or 1 kHz in LW (R-X330VLB only).

Auto tuning
Holding either side of button pressed for more than 0.5 second and then releasing it starts auto tuning; when a broadcast is received, tuning will stop. But if either side of button is kept held in, scanning continues even when a broadcast is received. In auto tuning, pressing either side of button again stops scanning.

Note:
- **Tapping the button stops changing the frequency when the upper or lower frequency is reached, while, in auto tuning the frequency changes in the opposite direction.**

3. Removal Procedures



3-(1) Removing the Front Panel

Step 1: Demount the top cover by removing four screws from the two sides and two screws from the rear.
Step 2: Remove three screws securing the front panel on its upper side and three screws securing it on the lower side.
Step 3: Demount the switch PC board secured to the front panel with catches.

3-(2) Removing the Tuner P.C. Board

Step 1: Demount the top cover (see above item 3-(1), Step 1).
Step 2: Remove three screws ① through ③ securing the tuner PC board on its upper side.
Step 3: Remove three screws securing the antenna terminal on its rear side.

3-(3) Removing the Equalizer P.C. Board

Step 1: Demount the tuner PC board (see above item 3-(2)).
Step 2: Extract the four push-knobs.
Step 3: Remove four screws securing the push switch on the front side.
Step 4: Remove seven screws securing the pin jacks and other items on the rear side.
Step 5: Remove six screws securing the rear panel on its bottom side.

3-(4) Removing the Display P.C. Board

Step 1: Demount the top cover (see above item 3-(1), Step 1).
Step 2: Remove two screws securing the display PC board.

3-(5) Removing the S.E.A. Control P.C. Board

Step 1: Remove the front panel (see above item 3-(1)).
Step 2: Remove five miniscrews securing the slide volume knob on the front side.

3-(6) Removing the Power Amplifier P.C. Board

Step 1: Remove the front panel (see above item 3-(1)).
Step 2: Remove screw ④ securing the wire protector (made of transparent plastic).
Step 3: Remove screw ⑤ securing the heat-sink bracket on its upper side, as well as screw ⑥ securing it on its bottom side.
Step 4: Cut off wire clamp ⑦ (NOTE: When assembling, do not forget to properly arrange the wires with the wire clamp).
Step 5: Extract the two push-knobs.
Step 6: Remove two screws securing the push switch on the front side.

3-(7) Removing the Switch P.C. Board

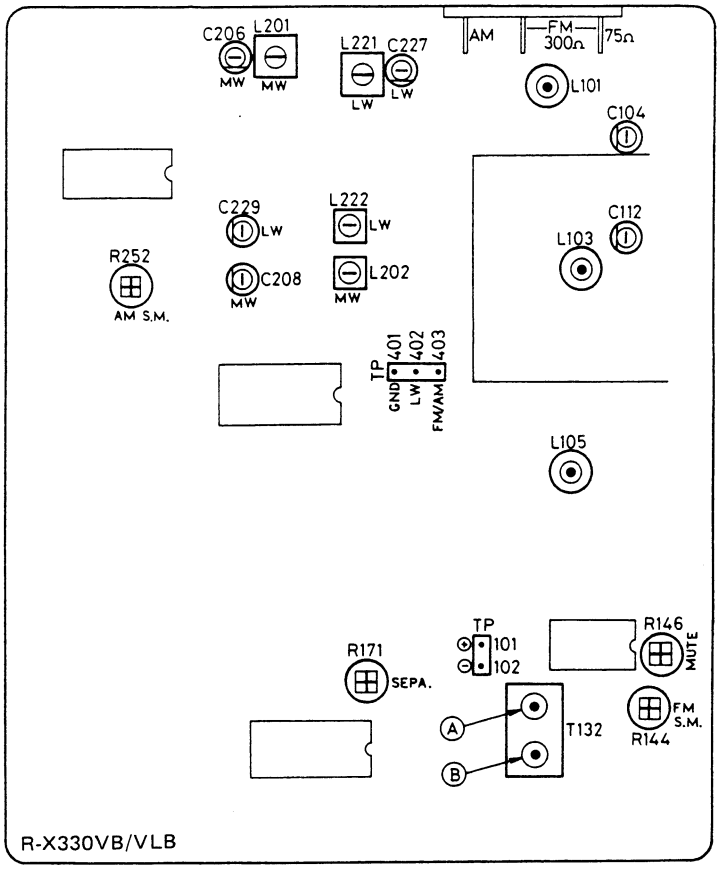
Step 1: Remove the front panel (see above item 3-(1)).
Step 2: Remove four screws securing the push-switch on the front side.

3-(8) Removing the Power Transistors

Step 1: Demount the top cover and the bottom cover.
Step 2: Remove the screws securing the power transistors by bended screw driver.
Note: Part number of bended screw driver is "EBSJ1005".

4. Adjustment Procedures

4-(1) FM/AM Tuner



R-X330VB/VLB

FM Section

Band Cover

1. Set the frequency display to 107.9 MHz.
2. Connect a DC VTVM to TP403 and TP401 (GND).
3. Adjust L105 so that the VTVM shows 9.00 V.
4. And set the frequency display to 87.9 MHz.
5. Check the VTVM voltage reading 1.7 V ± 0.5 V.

Sensitivity

Low Frequency

1. Connect an RF generator to the antenna terminals on the rear panel through a dummy antenna.
2. Set an RF generator to 90 MHz, a modulation of 1 kHz and a diviation of 75 kHz to provide an input of 2 μV.
3. Connect a VTVM and an oscilloscope to the Rec. out jacks on the rear panel.
4. Set the frequency display to 90 MHz.
5. Adjust coils L101 and L103 to maximize the output.

High Frequency

6. Set the RF generator to 106 MHz, a modulation of 1 kHz and a deviation of 75 kHz to provide an input of 2 μV.
7. Set the Frequency Display to 106 MHz.
8. Adjust the FM trimmers C104 and C112 to maximize the output.
9. Repeat these high and low frequencies adjustment alternately until maximum sensitivity is obtained.

Descriminator, Distortion and Signal Gain

1. Press to FM position.
2. Connect an RF generator, 1 kHz modulation and a 75 kHz deviation to the antenna terminals on the rear panel through a dummy antenna.
3. Connect an oscilloscope, Distortion Meter and VTVM to the Rec. out jacks on the rear panel.
4. Set the RF generator to 98 MHz, generator output to minimize.
5. Set the Frequency Display to a 98 MHz.
6. Connect a DC VTVM between TP101 and TP102.
7. Adjust the core indicated arrow (A) of T132 for DC VTVM reading of 0 (zero) mV.
8. And set the RF generator output to 1 mV.
9. Adjust the core indicated arrow (B) of T132 so that the distortion is minimized.

Stereo Separation

1. Switch the selector of stereo modulator to left channel modulation.
2. Adjust R171 so that the output of right channel is minimized.
3. Switch the selector of the modulator to right channel modulation.
4. Adjust R171 so that the left channel is minimized.
5. Set R171 to a average, if the separation of left and right is different.

FM Muting

1. Connect the RF generator to the antenna terminal on the rear panel.
2. Set the RF generator at 100.1 MHz, 5 μV. Rotate R146 clockwise, and stop rotating at the point where muting is eliminated (signals are output).

FM-signal Strength Meter

3. Set the RF generator at 100.1 MHz, 100μV. While rotating R144 clockwise, adjust the FM-signal strength meter so that this meter displays 40 dB.

AM(MW) Section

Band Cover

1. Press to AM (MW) position.
2. Set the frequency display to 530 kHz (10 kHz channel step), or 522 kHz (9 kHz channel step).
3. Connect DC VTVM to TP403 and TP401 (GND).
4. Adjust L202 so that the VTVM shows 1.05 V (530 kHz), or 0.95 V (522 kHz).
5. And set the frequency display to 1710 kHz (10 kHz channel step), or 1611 kHz (9 kHz channel step).
6. Adjust C208 so that the DC VTVM reads 9.00 V for 1710 kHz, or 7.50 V for 1611 kHz.

Tracking and Sensitivity

1. Connect the RF generator to the antenna terminal on the rear panel.
2. Set the generator to 600 kHz (or 603 kHz) with 30 % modulation at 400 Hz.
3. Set the frequency display to 600 kHz, or 603 kHz.
4. Adjust L201 to maximize the output.
5. Set the generator to 1400 kHz, or 1404 kHz.
6. Set the frequency display of the unit to 1400 kHz, or 1404 kHz.
7. Adjust C206 so that the output signal is maximized.
8. Repeat these adjustments (1 ~ 7) alternately untill maximum sensitivity is obtained.

LW Section (for R-X330VLB only)

Band Cover

1. Press to LW position.
2. Set the frequency display to 144 kHz.
3. Connect a DC VTVM to TP402 and TP401 (GND).
4. Adjust so that the VTVM shows 0.73 V.
5. Set the frequency display to 353 kHz.
6. Adjust C229 so that the VTVM. reads 7.70 V.

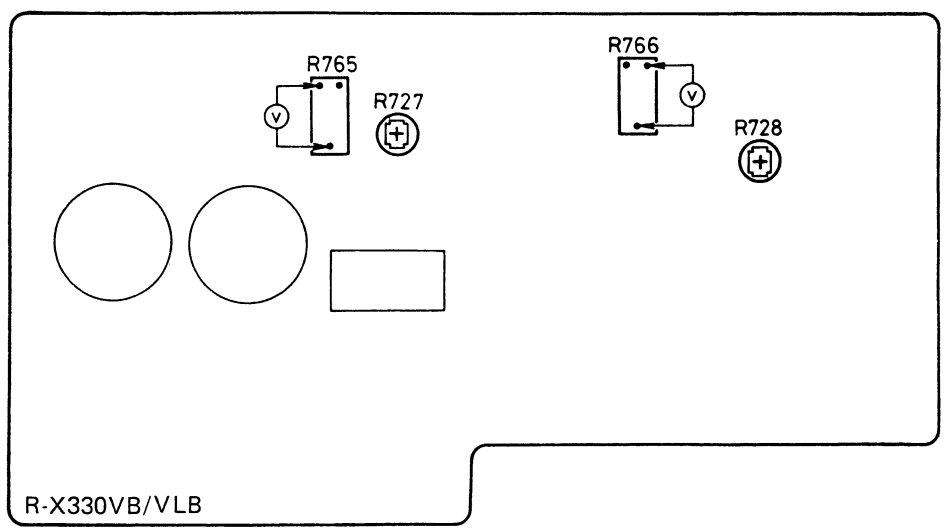
Tracking and Sensitivity

1. Connect the RF generator to the antenna terminal on the rear panel.
2. Set the generator to 164 kHz with 30 % modulation at 300 Hz.
3. Set the frequency display to 164 kHz.
4. Adjust L221 to maximize the output.
5. Set the frequency generator to 353 kHz.
6. Set the frequency display of the unit to 353 kHz.
7. Adjust C227 so that the output signal is maximized.
8. Repeat these adjustments (1 ~ 7) alternately untill maximum selectivity is obtained.

AM-signal Strength Meter

1. Connect the RF generator to the antenna terminal on the rear panel. On this work, use the dummy antenna and achieve connection in series via 5.6 kΩ.
2. Set the RF generator either at 999 kHz (9 kHz step) or 1,000 kHz (10 kHz step), 1 mV.
3. While rotating R252 clockwise, adjust the AM-signal strength meter so that this meter displays 70 dB.

4-(2) Power Amplifier Idling Current



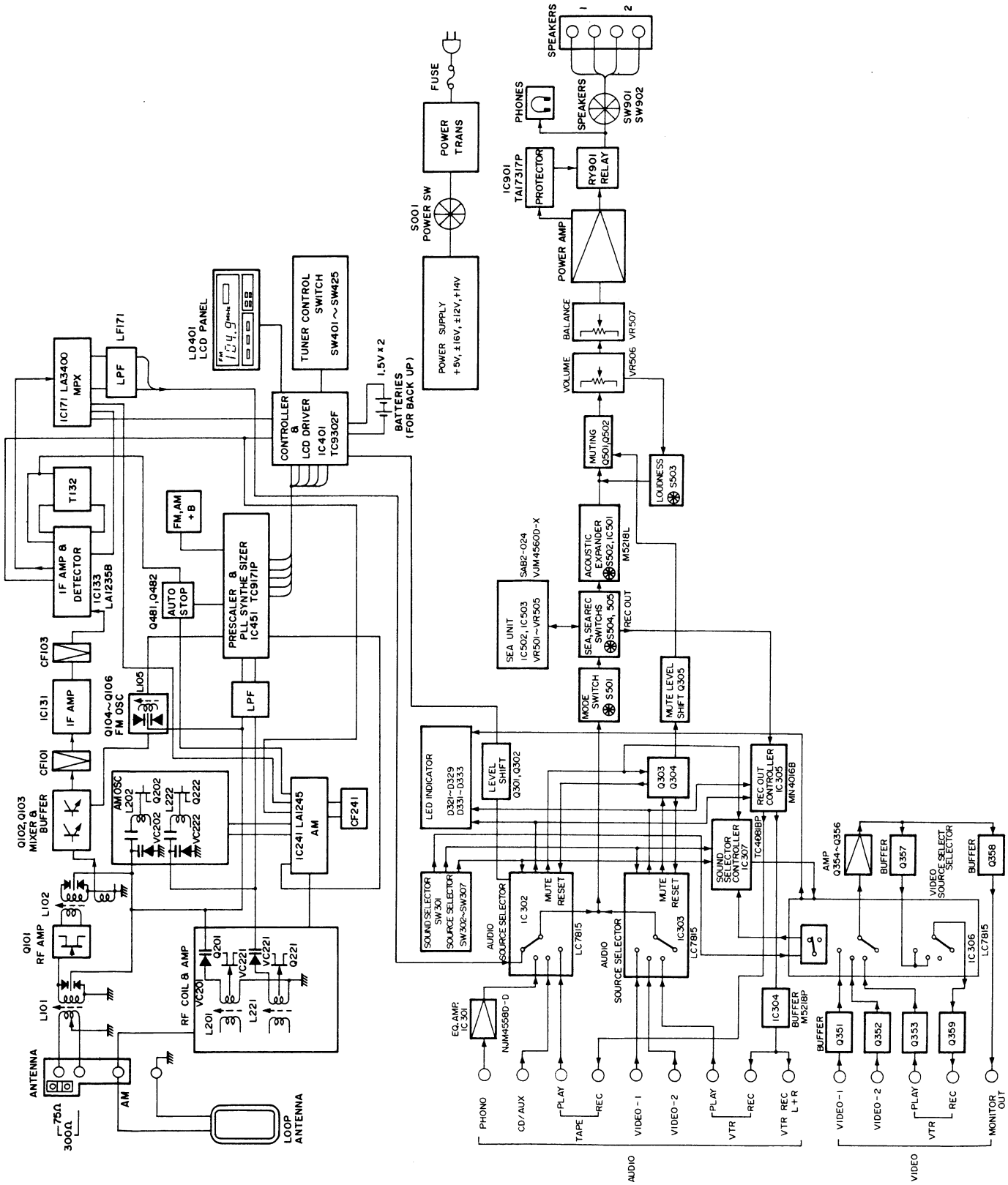
Precaution

1. Turn R727 and R728 fully counterclockwise before the power switch on.
2. Allow the set warm up at least 5 minutes before adjustment.
3. Must keep the heatsink to prevent overheating before adjustment.
4. Set the volume control to minimum during this adjustment.

Adjustment

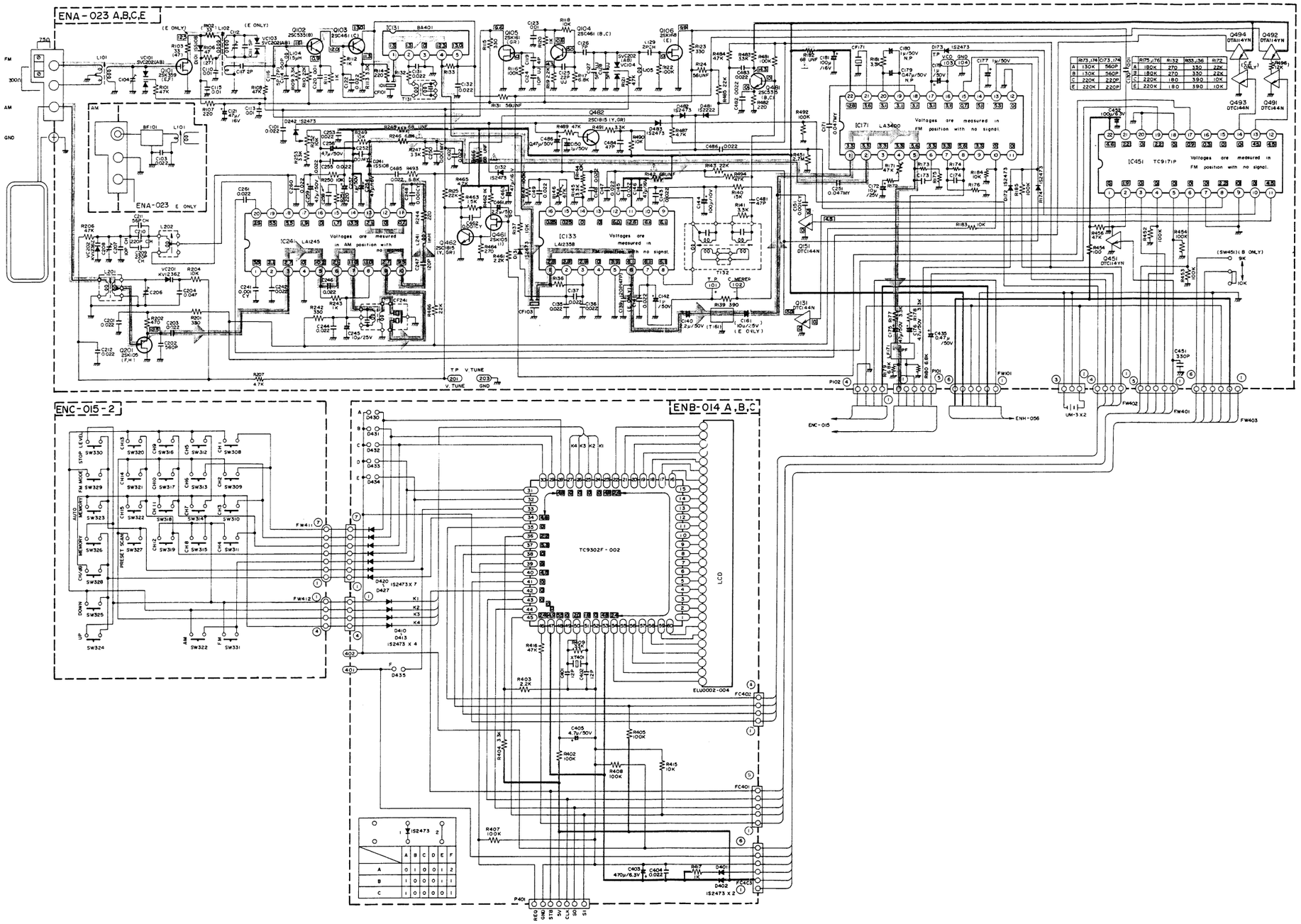
5. Connect a DC VTVM to R765 resistor's leads for left channel, or to R766's leads for right channel.
6. Adjust R727 for left channel, or R728 for right channel, so that the DC VTVM reads 5 mV.

5. Block Diagram



6.R-X330VB Schematic Diagram

6-(1) R-X330VB Tuner Section

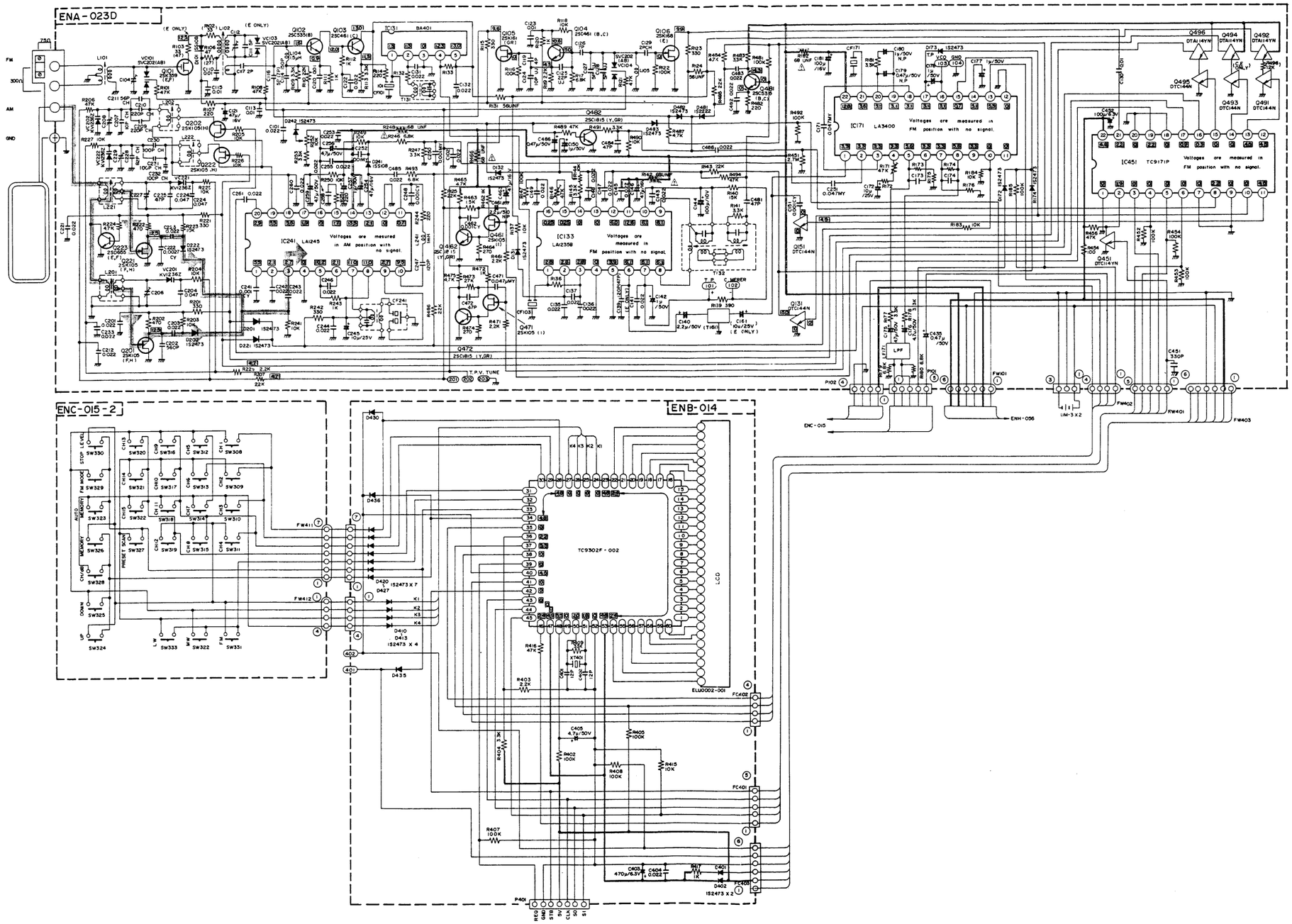


Notes:

1. ▭ shows DC voltage to the chassis with no signal input.
2. —— indicates positive B power supply.
3. - - - - indicates negative B power supply.
4. ▒▒ indicates signal path.
5. When replacing the parts in the darkned area (▒▒) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

R-X330VB R-X330VLB	R-X330VB R-X330VLB

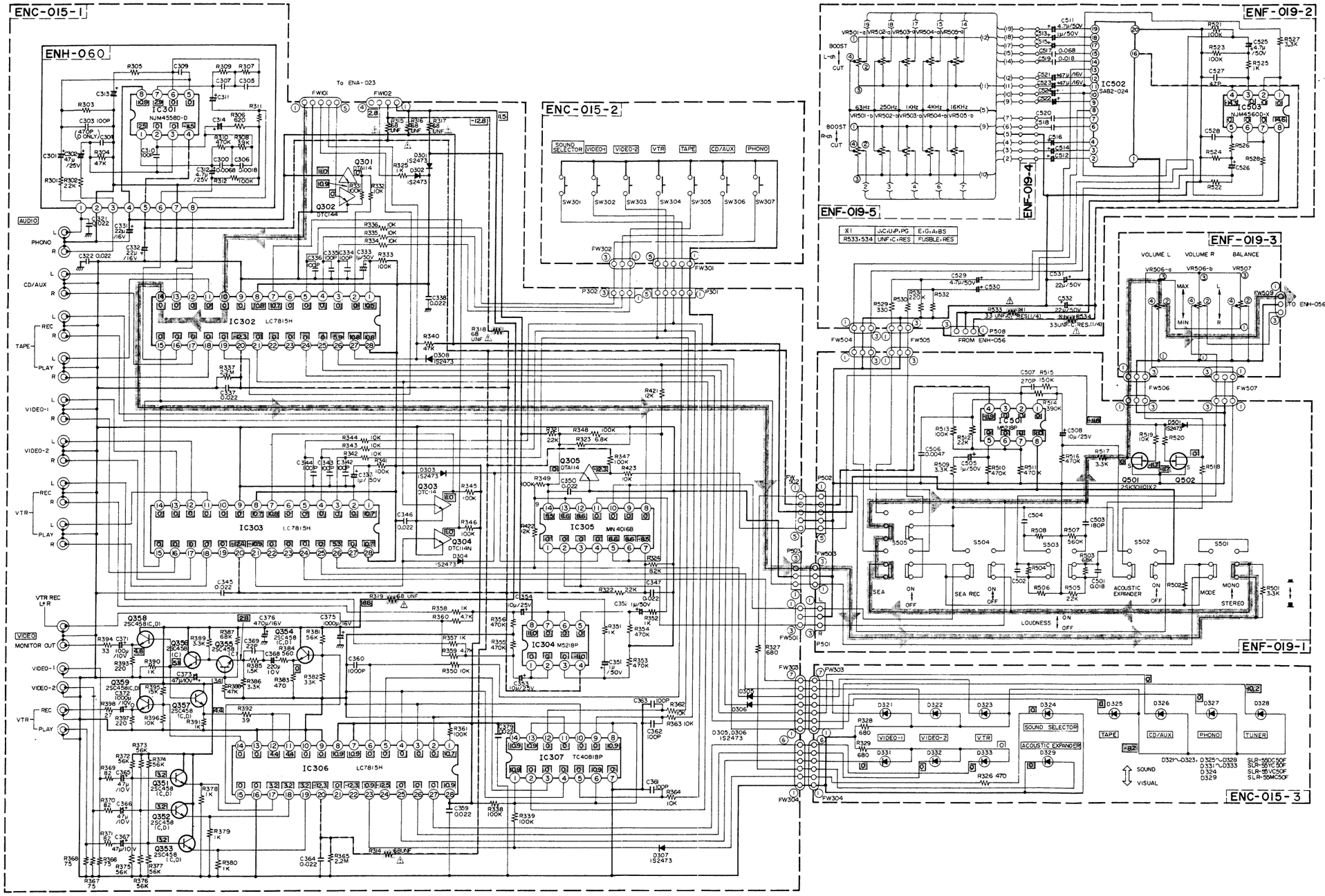
6-(2) R-X330VLB Tuner Section



Notes:

1. ▭ shows DC voltage to the chassis with no signal input.
2. —— indicates positive B power supply.
3. – – – – indicates negative B power supply.
4. ▒▒▒ indicates signal path.
5. When replacing the parts in the darkned area (▒▒▒) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

6-(3) R-X330VB/R-X330VLB AV Selector Section

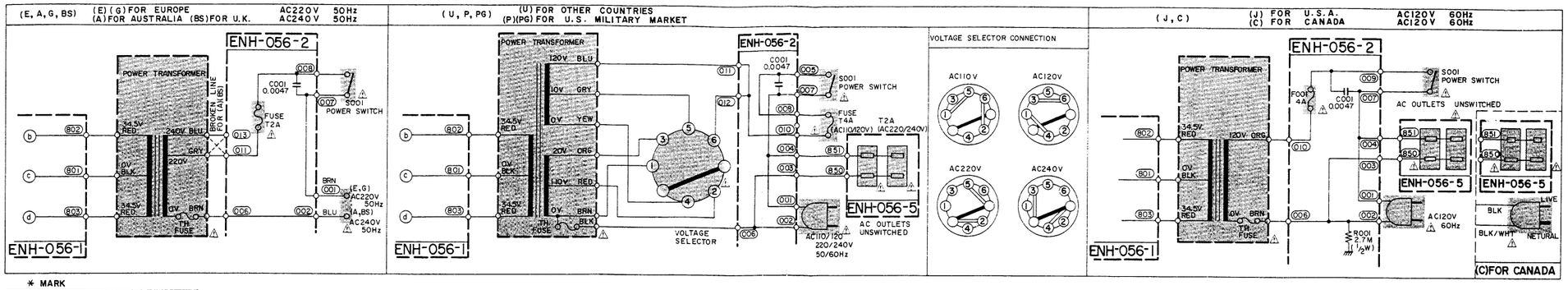


Notes:

1. ▭ shows DC voltage to the chassis with no signal input.
2. —— indicates positive B power supply.
3. – – – indicates negative B power supply.
4. ▨ indicates signal path.
5. When replacing the parts in the darkned area (▨) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

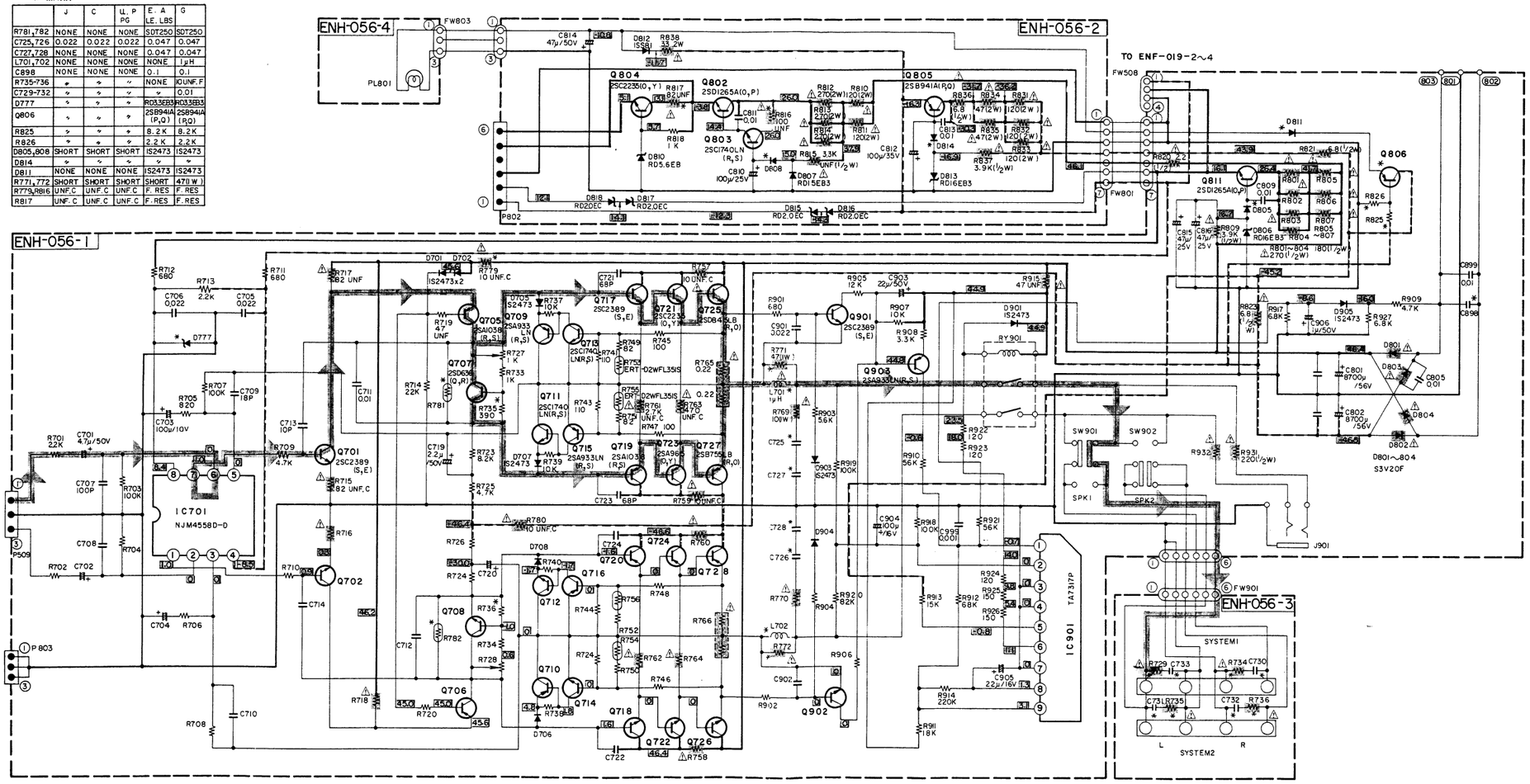
R-X330VB	R-X330VB
R-X330VLB	R-X330VLB

6-(4) R-X330VB/R-X330VLB Amplifier Section



* MARK

	J	C	U, P PG	E, A LE, LBS	G
R781,782	NONE	NONE	NONE	SDT250	SDT250
C725,726	0.022	0.022	0.022	0.047	0.047
C727,728	NONE	NONE	NONE	0.047	0.047
L701,702	NONE	NONE	NONE	NONE	1μH
C898	NONE	NONE	NONE	0.1	0.1
R735-736	〃	〃	〃	NONE	10UNF.F
C729-732	〃	〃	〃	〃	0.01
D777	〃	〃	〃	RD33ER3	RD33EB3
Q806	〃	〃	〃	2SB941A (P,Q)	2SB941A (RQ)
R825	〃	〃	〃	8.2K	8.2K
R826	〃	〃	〃	2.2K	2.2K
D805,808	SHORT	SHORT	SHORT	IS2473	IS2473
D814	〃	〃	〃	〃	〃
D811	NONE	NONE	NONE	IS2473	IS2473
R771,772	SHORT	SHORT	SHORT	SHORT	47Ω(W)
R779,R816	UNF.C	UNF.C	UNF.C	F. RES	F. RES
R817	UNF. C	UNF.C	UNF.C	F. RES	F. RES



Notes:

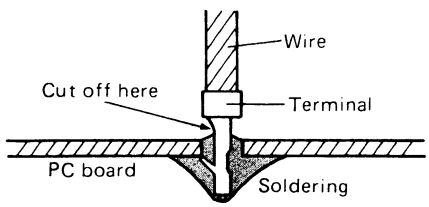
1. ▭ shows DC voltage to the chassis with no signal input.
2. —— indicates positive B power supply.
3. – – – indicates negative B power supply.
4. ▨ indicates signal path.
5. When replacing the parts in the darkned area (▨) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

7. Servicing Method for AWG #20 Wires with Clamping Terminals

(1) Application objective ⇨ Confirmation of safety
Used to prevent breakage/disconnection troubles of primary and secondary wires within PC boards (or between PC boards). Even when wire breakage/disconnection has actually occurred, a safe air-gap distance between the primary wire and the secondary wire/possibly contacting metal surface can be maintained because the terminal retains the wire sheathing.

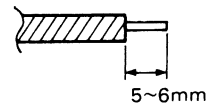
(2) Type of wire used
① 1015 AWG-#20 (single-coated)
② 1672 AWG-#20 (double-coated)

(3) Servicing precautions
① The structural design of this terminal causes its catch to hook onto the PC board, preventing the wire from being easily pulled out. As shown in the figure, use cutting pliers or a similar tool to cut off the ends of the terminal and wire; then remove the remaining terminal clip by melting the soldering.

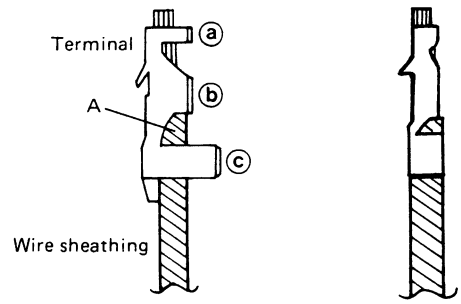


② Prior to soldering the wire onto the PC board, confirm safety by pressure-fitting the terminal to the wire by observing the following procedures.

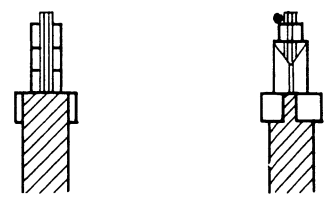
1. Strip off the wire 5 ~ 6 mm from its end.



2. Insert. the wire until its sheathing contacts section "A" of the terminal and pressure-fit the terminal clamp at three sections of ⓐ , ⓑ , and ⓒ (section ⓒ is especially important to assure safety. Exercise particular care to achieve secure clamping).



③ Part No., and name
Part No. : 5298T
Name : CRIMP PIN

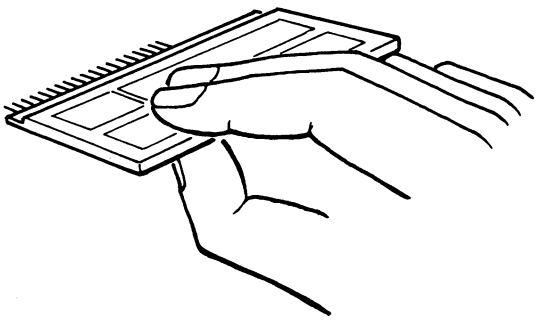


8. Handling precautions of LCD panels

The LCD (Liquid Crystal Display) panel employed in this device requires the following handling precautions.

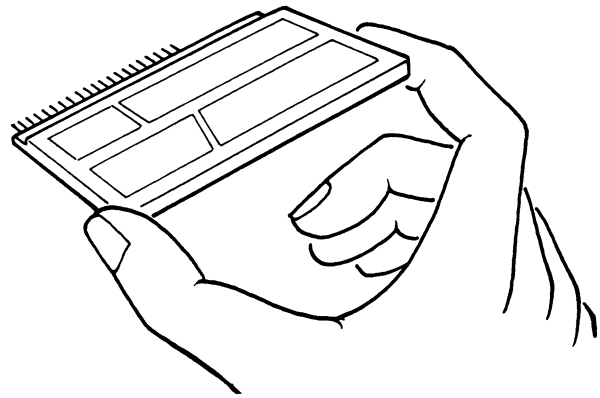
1. Since the LCD is made of plate glass, never apply strong mechanical impact to it.

Do not forcibly press the light-polarizing plate.



×

When handling, grip it as shown in the figure below.



○

2. When handling the LCD, wear gloves whenever possible.
3. When the light-polarizing plate (surface other than silk-printed areas) becomes contaminated, use an applicator wet with isopropyl alcohol to gently wipe it clean. As for the silk-printed areas, use a soft cloth also to gently wipe it clean.

   NOTE: The light-polarizing plate attached to the LCD surface and the silk-printed areas are made of soft material.
4. As much as possible, avoid exposing the LCD to irradiation of harmful light (direct sunlight or ultraviolet rays), especially when the device is not in use.
5. Do not imprint DC voltage on pins of the LCD (characteristics will be degraded).
6. When the LCD is damaged, resulting in leakage of liquid crystal, be very cauitons to avoid the liquid from penetrating one's mouth or being swallowed. Should liquid crystal contact the hands or clothing, immediately wash with water, using soap or other appropriate cleanser.

JVC
VICTOR COMPANY OF JAPAN, LIMITED
STEREO DIVISION, YAMATO PLANT, 1644, SHIMOTSURUMA, YAMATO-SHI, KANAGAWA-KEN, 242, JAPAN

(No. 2822)

Printed in Japan
6002 (N)

PARTS LIST

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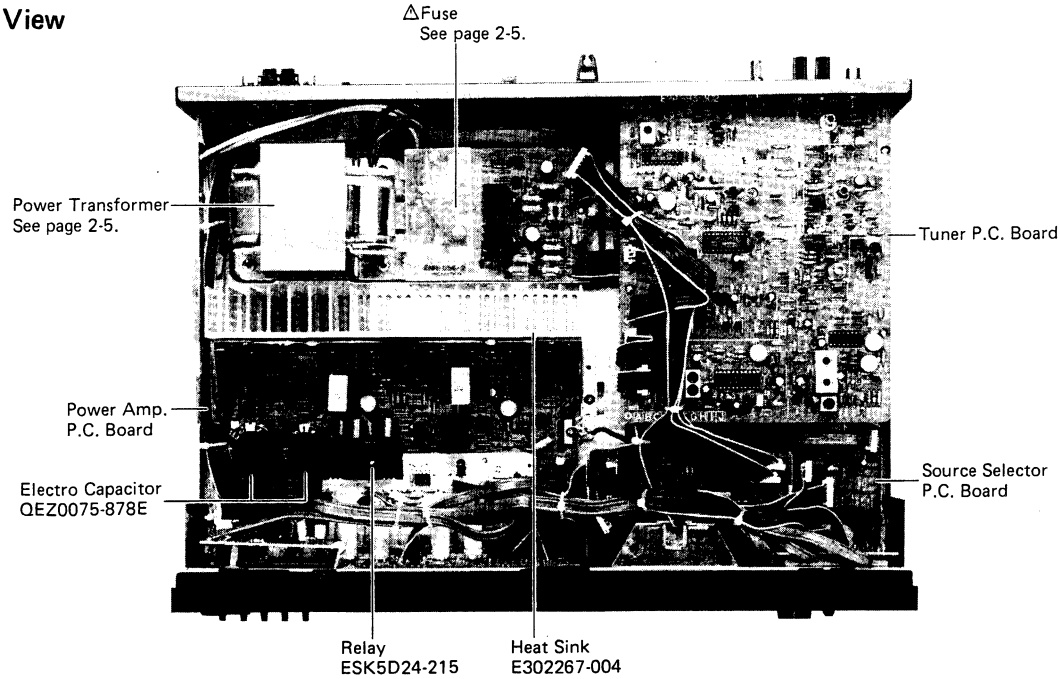
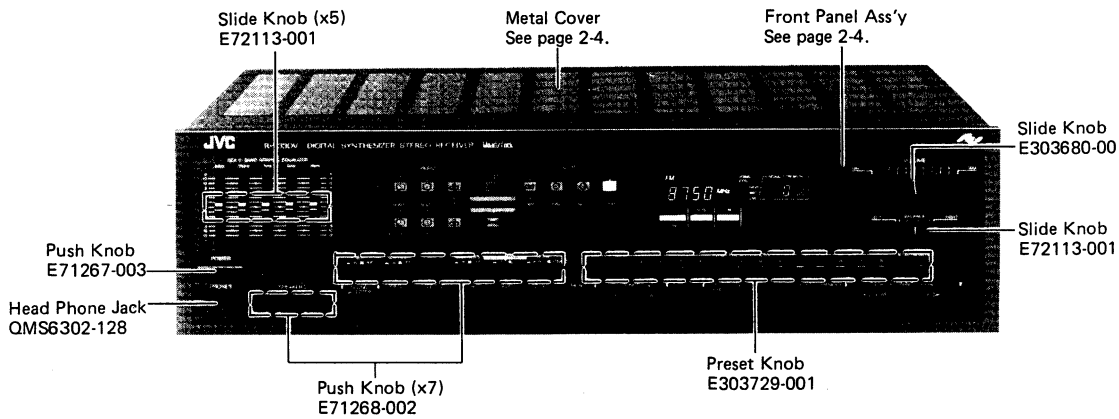
1. Main Parts Locations

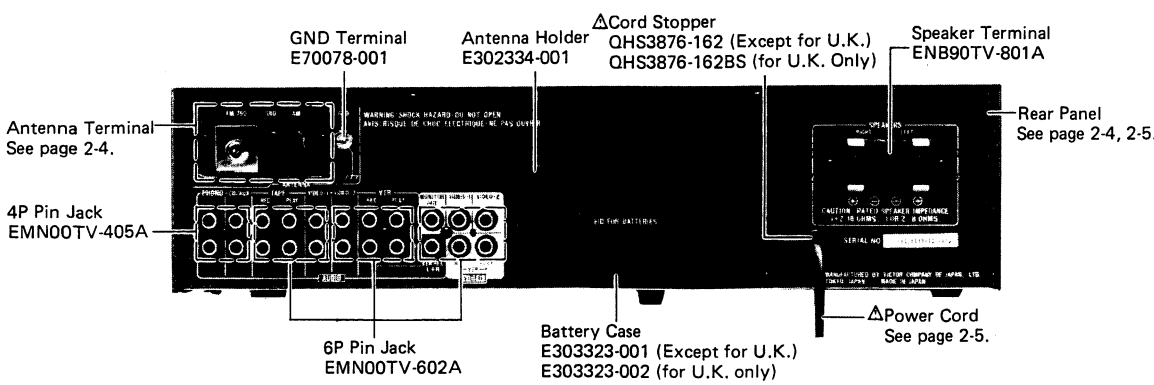
1-(1) Top View



1-(2) Front View

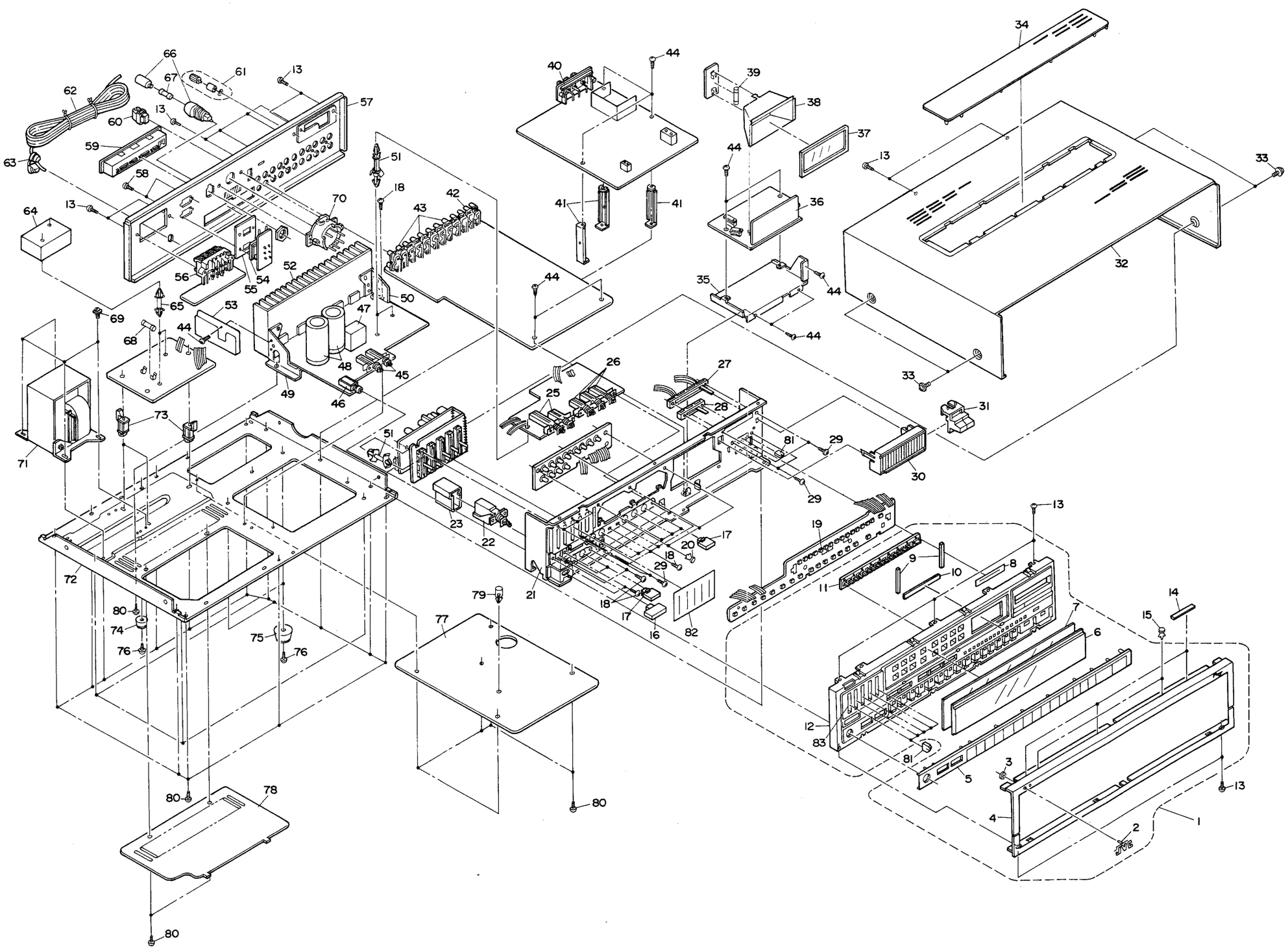


1-(3) Rear View



△ Safety Parts

2. Exploded Views and Part Numbers



No.		Part Number	Part Name	Q'ty	Description	Areas
1		EFP-RX330VB	Front Panel Ass'y	1		J, C, P, PG, E, A, G, U
		EFP-RX330VLB	Front Panel Ass'y	1		LE, LBS
2		E70913-001	JVC Mark	1		
3		E60912-003	Speed Nut	1		
4		E24995-001	Front Panel	1		J, C, P, PG, E, A, G, U
		E24995-002	Front Panel	1		LE, LBS
5		E24997-001	Front Plate	1		J, C, P, PG, E, A, G, U
		E24997-002	Front Plate	1		LE, LBS
6		E303730-001	Window Screen	1		
7		E303732-001	Indicator Plate	1		
8		E72106-002	Spacer	1		
9		EXO038005N10S	Felt Spacer	2		
10		EXO092004N10S	Felt Spacer	1		
11		E303729-001	Preset Knob	1		
12		E11123-001	Front Base	1		J, C, P, PG, E, A, G, U
		E11123-002	Front Base	1		LE, LBS
13		SBSB3008M	Tapping Screw	13		
14		EXO040007N50S	Felt Spacer	3		
15		E48729-009	Plastic Rivet	2		
16		E71267-003	Push Knob	1	Power	
17		E71268-002	Push Knob	7		
18		SBST3006Z	Screw	9		
19		ESP0001-007N	Push Switch	33	Tact Switch	
20		E48729-008	Plastic Rivet	3		
21		E24999-001	Front Bracket	1		
22	⚠	QSP1106-004	Push Switch	1	Power	J, C, P, PG, E, A, G, LE, U
	⚠	QSP1106-004BS	Push Switch	1	Power	LBS
23	⚠	E71004-001	Switch Cover	1		
24		QVUB01W-E15B	Variable Resistor	1	SEA VOLUME	
25		QST4261-E09	Push Switch	1	SEA/SEAREC	
26		QST4361-E07	Push Switch	1	Mode/LU DNES/	
					ACOUSTIC EXPANDER	
27		QVUB01B-EF5B	Variable Resistor	1	Mastor Volume	
28		QVWA01W-EF5C	Variable Resistor	1	BALANCE	
29		E70053-001	Screw	9		
30		E303681-001	Volume Escutchion	1	VOLUME	
31		E303680-001	Slide Knob	1	VOLUME	
32		E24719-004	Metal Cover	1		J, C, P, PG, G, A, U
		E24720-002	Metal Cover	1		E, LE, LBS
33		E61660-004	Special Screw	4		E, LE, LBS
34		E23862-004	Grill	1		
35		E303284-002	LCD Bracket	1		
36		ELU0002-004	L.C.D. PANEL	1		
37		E71286-004	Sheet	1		
38		E303283-001	Lamp Holder	1		
39		ELP4101-003	Fuse Lamp	1		
40		E03572-016	Antenna Terminal	1		J, C, P, PG, E, A, LE, LBS, U
		EMB01YV-201A	Antenna Terminal	1		G
41		E71278-001	Circuit Board Holder	3		
42		EMN00TV-405A	4P Pin Jack	1		
43		EMN00TV-602A	6P Pin Jack	3		
44		SBSB3008N	Tapping Screw	11		
45		QST4261-E07	Push Switch	1		
46		QMS6302-128	Head Phone Jack	1		
47		ESK5D24-215	Relay	1		
48		QEZ0075-878E	Electro Capacitor	2		
49		E302655-002	Heat Sink BKT	1	Left	
50		E302654-002	Heat Sink BKT	1	Right	
51		E300796-002	Fastener	6		
52		E302267-004	Heat Sink	1		
53		E69500-003	Sheet	1		
54	⚠	QMC0400-001	AC Outlet	1		C
	⚠	QMC0437-001	AC Outlet	1		J, P, PG, U
55		E69589-004	Spacer	1		J
56		EMB90TV-801A	Speaker Terminal	1		
57		E24689-023	Rear Panel	1		J, C

⚠Safety Parts

No.		Part Number	Part Name	Q'ty	Description	Areas
		E24689-024	Rear Panel	1		P, PG, U
		E24689-025	Rear Panel	1		E, A, LE, LBS
		E24689-026	Rear Panel	1		G
58		SDSB3008M	Tapping Screw	2		
59		E303323-001	Battery Case	1		J, C, P, PG, E, A, LE, LBS, U
		E303323-002	Battery Case	1		G
60		E302334-001	Antenna Holder	1		
61		E70078-001	GND Terminal	1		
62	⚠	QMP1200-200	Power Cord	1		J
	⚠	QMP1480-200H	Power Cord	1		C
	⚠	QMP2560-244	Power Cord	1		A
	⚠	QMP3900-200	Power Cord	1		E, LE, G
	⚠	QMP7600-200	Power Cord	1		P, PG, U
	⚠	QMP9017-008BS	Power Cord	1		LBS
63	⚠	QHS3876-162	Cord Stopper	1		J, C, P, PG, E, LE, A, G, U
		QHS3876-162BS	Cord Stopper	1		LBS
64	⚠	E302271-001	Primary Cover	1		A, G, E, LE, LBS
65		E302321-001	Fastner	2		
66		QMG0301-003	Fuse Holder	1		P, PG, U
67	⚠	QMF51A2-2R0S	Fuse	1		PG, U
	⚠	QMF51A2-4R0S	Fuse	1		P
68	⚠	QMF51A2-2R0S	Fuse	1		E, LE, A, G
	⚠	QMF51E2-2R0SBS	Fuse	1		LBS
	⚠	QMF61U1-4R0	Fuse	1		J, C
69		E65389-002	Ass'y Screw	4		
70	⚠	QSR0085-001U	Voltage Selector	1		
71	⚠	ETP1100-09JA	Power Transformer	1		J, C
	⚠	ETP1100-09FA	Power Transformer	1		P, PG, U
	⚠	ETP1100-09EA	Power Transformer	1		E, LE, A, G
	⚠	ETP1100-09EABS	Power Transformer	1		LBS
72		E11122-001	Chassis Bace	1		
73		E34455-001	Fastner	3		
74		QFZ1508-001	Foot	1		
75		E47227-012	Foot	4		
76		SBSB3010N	Tapping Screw	5		
77		E303775-001	Bottom Cover	1		
78		E302295-001	Bottom Cover	1		
79		E71335-001	Fastener	1		
80		SBSB3006N	Tapping Screw	15		
81		E72113-001	Slide Knob	6		
82		E72256-002	Spacer	1		
83		E303734	SEA Escutcheon	1		

⚠Safety Parts

The Marks for Designated Areas.

J . . . . . U.S.A.
C . . . . . Canada
E, LE . . . . . Europe
G . . . . . West Germany
A . . . . . Australia
P, PG . . . . . U.S. Military Market
LBS . . . . . U.K.
U . . . . . Other Countries

No mark indicates all Areas.

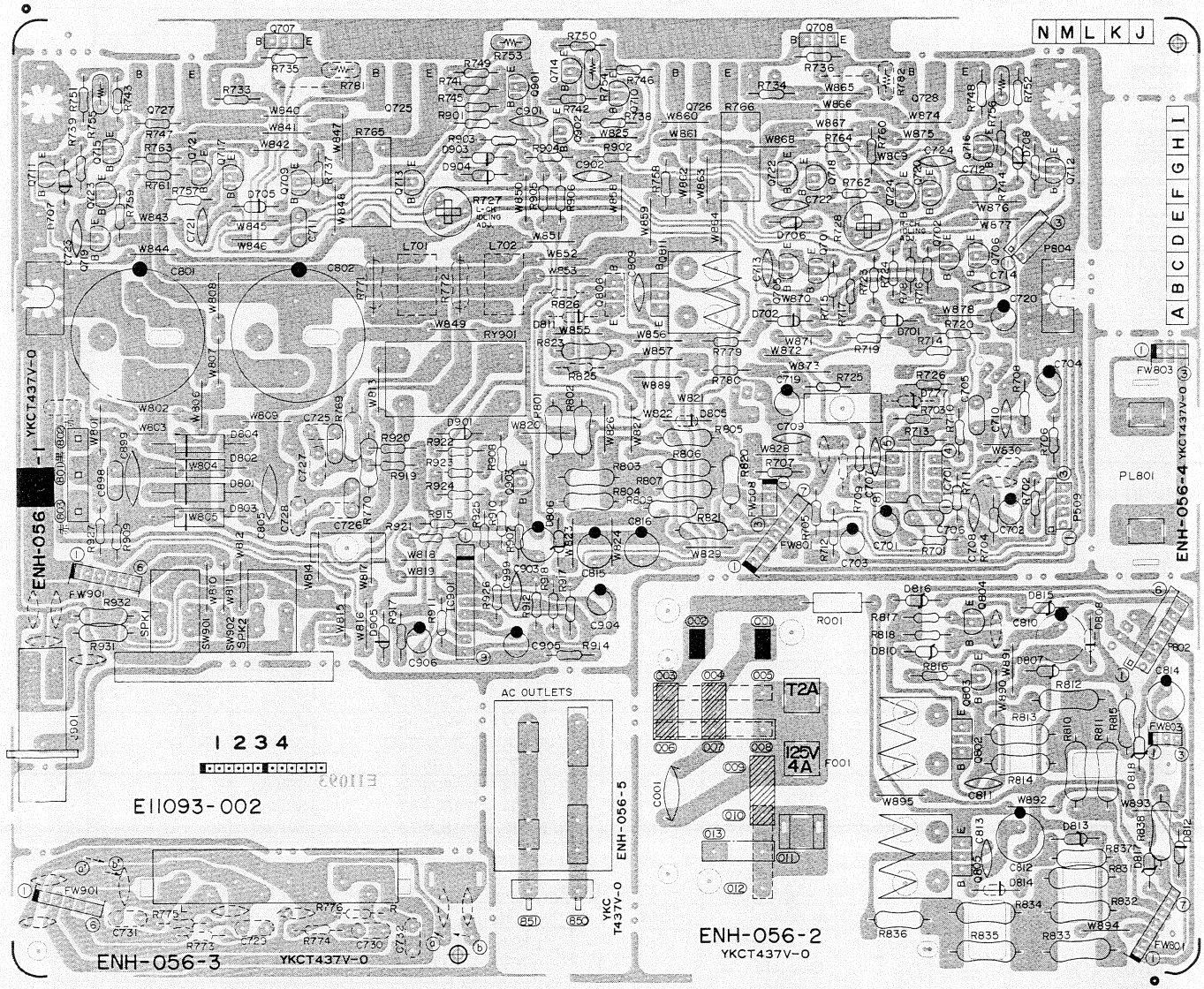
3. Printed Circuit Board Ass'y and Parts List

3-(1) ENH-056 □ Power Amp. P.C. Board Ass'y

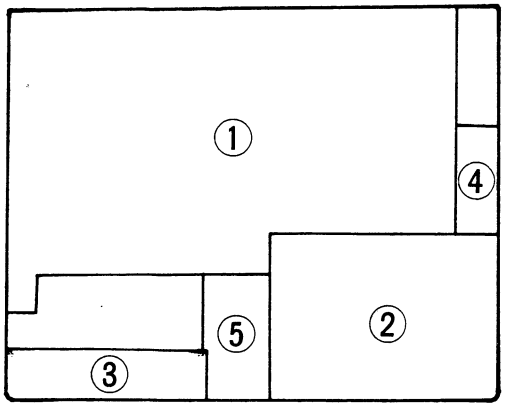
Note: ENA-056 □ varies according to the areas employed. See note (1) when placing an order.

Note (1)

P.C. Board Ass'y	Designated Areas
ENH-056 [A]	U.S.A.
ENH-056 [B]	U.S. Military Market Other Countries
ENH-056 [C]	Europe, Australia
ENH-056 [DBS]	U.K.
ENH-056 [E]	West Germany
ENH-056 [F]	Canada



Each Individual P.C. Board Location



1. ENH-056-1 Power Amp P.C. Board
2. ENH-056-2 Fuse & Power Supply P.C. Board
3. ENH-056-3 Speaker Terminal P.C. Board
4. ENH-056-4 Lamp P.C. Board
5. ENH-056-5 AC Outlet P.C. Board

Transistors

⚠	Item No.	Part Number	Description		Areas
				Maker	
	Q701	2SC2389(S,E)	Silicon		
	Q702	2SC2389(S,E)	Silicon		
	Q705	2SA1038(R,S)	Silicon		
	Q706	2SA1038(R,S)	Silicon		
	Q707	2SD636(Q,R)	Silicon	Matsushita	
	Q708	2SD636(Q,R)	Silicon	Matsushita	
	Q709	2SA933LN(R,S)	Silicon		
	Q710	2SA933LN(R,S)	Silicon		
	Q711	2SC1740LN(R,S)	Silicon		
	Q712	2SC1740LN(R,S)	Silicon		
	Q713	2SC1740LN(R,S)	Silicon		
	Q714	2SC1740LN(R,S)	Silicon		
	Q715	2SA933LN(R,S)	Silicon		
	Q716	2SA933LN(R,S)	Silicon		
	Q717	2SC2389(S,E)	Silicon		
	Q718	2SC2389(S,E)	Silicon		
	Q719	2SA1038(S,E)	Silicon		
	Q720	2SA1038(S,E)	Silicon		
	Q721	2SC2235(O,Y)	Silicon	Toshiba	
	Q722	2SC2235(O,Y)	Silicon	Toshiba	
	Q723	2SA965(O,Y)	Silicon	Toshiba	
	Q724	2SA965(O,Y)	Silicon	Toshiba	
	Q725	2SD845LB(R,O)	Silicon		
	Q726	2SD845LB(R,O)	Silicon		
	Q727	2SB755LB(O,R)	Silicon	Toshiba	
	Q728	2SB755LB(O,R)	Silicon	Toshiba	
	Q802	2SD1265A(O,P)	Silicon	Matsushita	
	Q803	2SC1740LN(R,S)	Silicon		
	Q804	2SC2235(O,Y)	Silicon	Toshiba	
	Q805	2SB941A(P,Q)	Silicon	Matsushita	
	Q806	2SB941A(P,Q)	Silicon	Matsushita	C
	Q806	2SB941A(P,Q)	Silicon	Matsushita	DBS
	Q806	2SB941A(P,Q)	Silicon	Matsushita	E
	Q811	2SD1265A(O,P)	Silicon	Matsushita	
	Q901	2SC2389(S,E)	Silicon		
	Q902	2SC2389(S,E)	Silicon		
	Q903	2SA933LN(R,S)	Silicon		

Diodes

⚠	Item No.	Part Number	Description		Areas
				Maker	
	D701	1S2473	Silicon		
	D702	1S2473	Silicon		
	D705	1S2473	Silicon		
	D706	1S2473	Silicon		
	D707	1S2473	Silicon		
	D708	1S2473	Silicon		
	D777	RD3.3EB2	Zener	NEC	C
	D777	RD3.3EB2	Zener	NEC	DBS
	D777	RD3.3EB2	Zener	NEC	E
⚠	D801	S3V20F	Silicon	Shindengen	
⚠	D802	S3V20F	Silicon	Shindengen	
⚠	D803	S3V30F	Silicon	Shindengen	
⚠	D804	S3V20F	Silicon	Shindengen	
	D805	1S2473	Silicon		C
	D805	1S2473	Silicon		DBS
	D805	1S2473	Silicon		E
	D806	RD16EB3	Zener	NEC	
	D807	RD15EB3	Zener	NEC	
	D808	1S2473	Silicon		C
	D808	1S2473	Silicon		DBS
	D808	1S2473	Silicon		E
	D810	RD5.6EB3	Zener	NEC	
	D811	1S2473	Silicon		C
	D811	1S2473	Silicon		DBS
	D811	1S2473	Silicon		E
	D812	1SS81	Silicon	Hitachi	
	D813	RD16EB3	Zener	NEC	
	D814	1S2473	Silicon		C
	D814	1S2473	Silicon		DBS
	D814	1S2473	Silicon		E
	D815	RD2.0EC	Zener	NEC	
	D816	RD2.0EC	Zener	NEC	
	D817	RD2.0EC	Zener	NEC	
	D818	RD2.0EC	Zener	NEC	
	D901	1S2473	Silicon		
	D903	1S2473	Silicon		
	D904	1S2473	Silicon		
	D905	1S2473	Silicon		

⚠ Safety Parts

ICs

⚠	Item No.	Part Number	Description		Areas
				Maker	
	IC701	NJM4558D-D	I.C.	Dainichi	
	IC901	TA7317P	I.C.	Toshiba	

Coils

⚠	Item No.	Part Number	Description		Areas
	L701	EQL0001-1R0	Inductor		E
	L702	EQL0001-1R0	Inductor		E

Capacitors

⚠	Item No.	Part Number	Description			Areas
⚠	C001	QCZ9019-472	4700PF		Ceramic	
	C701	QEK61HM-475	4.7MF	50V	Electro	
	C702	QETC1HM-475	4.7MF	50V	Electro	
	C703	QEK61CM-107	100MF	16V	Electro	
	C704	QETC1CM-107	100MF	16V	Electro	
	C705	QFN31HK-223	0.022MF	50V	Mylar	
	C706	QFN31HK-223	0.022MF	50V	Mylar	
	C707	QCS31HJ-101	100PF	50V	Ceramic	
	C708	QCS31HJ-101	100PF	50V	Ceramic	
	C709	QCS31HJ-180	18PF	50V	Ceramic	
	C710	QCS31HJ-180	18PF	50V	Ceramic	
	C711	QFN31HK-103	0.01MF	50V	Mylar	
	C712	QFN31HK-103	0.01MF	50V	Mylar	
	C713	QCS31HJ-100	10PF	50V	Ceramic	
	C714	QCS31HJ-100	10PF	50V	Ceramic	
	C719	QETC1HM-225	2.2MF	50V	Electro	
	C720	QETC1HM-225	2.2MF	50V	Electro	
	C721	QCS31HJ-680	68PF	50V	Ceramic	
	C722	QCS31HJ-680	68PF	50V	Ceramic	
	C723	QCS31HJ-680	68PF	50V	Ceramic	
	C724	QCS31HJ-680	68PF	50V	Ceramic	
	C725	QFN31HK-473	0.047MF	50V	Mylar	C
	C725	QFN31HK-473	0.047MF	50V	Mylar	DBS
	C725	QFN31HK-473	0.047MF	50V	Mylar	E
	C725	QFN31HK-223	0.022MF	50V	Mylar	A
	C725	QFN31HK-223	0.022MF	50V	Mylar	B
	C725	QFN31HK-223	0.022MF	50V	Mylar	F
	C726	QFN31HK-473	0.047MF	50V	Mylar	C
	C726	QFN31HK-473	0.047MF	50V	Mylar	DBS
	C726	QFN31HK-473	0.047MF	50V	Mylar	E
	C726	QFN31HK-223	0.022MF	50V	Mylar	A
	C726	QFN31HK-223	0.022MF	50V	Mylar	B
	C726	QFN31HK-223	0.022MF	50V	Mylar	F
	C727	QFN31HK-473	0.047MF	50V	Mylar	C
	C727	QFN31HK-473	0.047MF	50V	Mylar	DBS
	C727	QFN31HK-473	0.047MF	50V	Mylar	E
	C728	QFN31HK-473	0.047MF	50V	Mylar	C
	C728	QFN31HK-473	0.047MF	50V	Mylar	DBS
	C728	QFN31HK-473	0.047MF	50V	Mylar	E
	C729	QFN31HK-103	0.01MF	50V	Mylar	E
	C730	QFN31HK-103	0.01MF	50V	Mylar	E
	C731	QFN31HK-103	0.01MF	50V	Mylar	E
	C732	QFN31HK-103	0.01MF	50V	Mylar	E
	C801	QEZ0075-878E	8700MF		Electro	
	C802	QEZ0075-878E	8700MF		Electro	
	C803	QFM82AK-473	0.047MF	100V	Mylar	
	C805	QCE22HP-103	0.01MF	500V	Ceramic	
	C809	QCF31HP-103	0.01MF	50V	Ceramic	
	C810	QET61EM-107	100MF	25V	Electro	
	C811	QCF31HP-103	0.01MF	50V	Ceramic	
	C812	QEH51VM-107	100MF	35V	Electro	
	C813	QCF31HP-103	0.01MF	50V	Ceramic	
	C814	QETC1HM-476	47MF	50V	Electro	
	C815	QEK61EM-476	47MF	25V	Electro	
	C816	QEK61EM-476	47MF	25V	Electro	
	C898	QFH42EK-104	0.1MF	250V	Electro	
	C898	QFH42EK-104	0.1MF	250V	Electro	
	C898	QFH42EK-104	0.1MF	250V	Electro	
	C899	QCE22HP-103	0.01MF	500V	Ceramic	
	C901	QCF21HP-223	0.022MF	50V	Ceramic	
	C902	QCF31HP-223	0.022MF	50V	Ceramic	
	C903	QEK61HM-226	22MF	50V	Electro	
	C904	QEK61CM-107	100MF	16V	Electro	
	C905	QEK61CM-226	22MF	16V	Electro	
	C906	QEK61HM-105G	1MF	50V	Electro	
	C999	QCY31HK-102	1000PF	50V	Ceramic	

Resistors

⚠	Item No.	Part Number	Description			Areas
⚠	R001	QRC128K-275EM	2.7M	1/2W	Composi	A
⚠	R001	QRC128K-275EM	2.7M	1/2W	Composi	F
	R701	QRD141J-222S	2.2K	1/4W	Carbon	
	R702	QRD141J-222S	2.2K	1/4W	Carbon	
	R703	QRD141J-104S	100K	1/4W	Carbon	
	R704	QRD141J-104S	100K	1/4W	Carbon	
	R705	QRD141J-821S	820	1/4W	Carbon	
	R706	QRD141J-821S	820	1/4W	Carbon	
	R707	QRD141J-104S	100K	1/4W	Carbon	
	R708	QRD141J-104S	100K	1/4W	Carbon	
	R709	QRD141J-472S	4.7K	1/4W	Carbon	
	T710	QRD141J-472S	4.7K	1/4W	Carbon	
	R711	QRD141J-681S	680	1/4W	Carbon	
	R712	QRD141J-681S	680	1/4W	Carbon	
	R713	QRD141J-222S	2.2K	1/4W	Carbon	
	R714	QRD141J-223S	22K	1/4W	Carbon	
⚠	R715	QRD145J-820S	82	1/4W	UNF. Carbon	
⚠	R716	QRD145J-820S	82	1/4W	UNF. Carbon	
⚠	R717	QRD145J-820S	82	1/4W	UNF. Carbon	
⚠	R718	QRD145J-820S	82	1/4W	UNF. Carbon	
	R719	QRD141J-470S	47	1/4W	Carbon	C
	R179	QRD141J-470S	47	1/4W	Carbon	DBS
	R719	QRD141J-470S	47	1/4W	Carbon	E
⚠	R719	QRD145J-470S	47	1/4W	UNF. Carbon	A
⚠	R719	QRD145J-470S	47	1/4W	UNF. Carbon	B
⚠	R719	QRD145J-470S	47	1/4W	UNF. Carbon	F
	R720	QRD141J-470S	47	1/4W	Carbon	C
	R720	QRD141J-470S	47	1/4W	Carbon	DBS
	R720	QRD141J-470S	47	1/4W	Carbon	E
⚠	R720	QRD145J-470S	47	1/4W	UNF. Carbon	A
⚠	R720	QRD145J-470S	47	1/4W	UNF. Carbon	B
⚠	R720	QRD145J-470S	47	1/4W	UNF. Carbon	F
	R723	QRD141J-822S	8.2K	1/4W	Carbon	
	R724	QRD141J-822S	8.2K	1/4W	Carbon	
	R725	QRD141J-472S	4.7K	1/4W	Carbon	
	R726	QRD141J-472S	4.7K	1/4W	Carbon	
	R727	QVP4A0B-102			Variable	
	R728	QVP4A0B-102			Variable	
	R733	QRD141J-102S	1K	1/4W	Carbon	
	R734	QRD141J-102S	1K	1/4W	Carbon	
	R735	QRD141J-391S	390	1/4W	Carbon	
	R736	QRD141J-391S	390	1/4W	Carbon	
	R737	QRD141J-103S	10K	1/4W	Carbon	
	R738	QRD141J-103S	10K	1/4W	Carbon	
	R739	QRD141J-103S	10K	1/4W	Carbon	
	R740	QRD141J-103S	10K	1/4W	Carbon	
	R741	QRD141J-111S	110	1/4W	Carbon	
	R742	QRD141J-111S	110	1/4W	Carbon	
	R743	QRD141J-111S	110	1/4W	Carbon	
	R744	QRD141J-111S	110	1/4W	Carbon	
	R745	QRD141J-101S	100	1/4W	Carbon	
	R746	QRD141J-101S	100	1/4W	Carbon	
	R747	QRD141J-101S	100	1/4W	Carbon	
	R748	QRD141J-101S	100	1/4W	Carbon	
	R749	QRD141J-820S	82	1/4W	Carbon	
	R750	QRD141J-820S	82	1/4W	Carbon	
	R751	QRD141J-820S	82	1/4W	Carbon	
	R752	QRD141J-820S	82	1/4W	Carbon	
	R753	ERT-D2WFL351S			Thermister	
	R754	ERT-D2WFL351S			Thermister	
	R755	ERT-D2WFL351S			Thermister	
	R756	ERT-D2WFL351S			Thermister	
⚠	R757	QRD145J-100S	10	1/4W	UNF. Carbon	
⚠	R758	QRD145J-100S	10	1/4W	UNF. Carbon	
⚠	R759	QRD145J-100S	10	1/4W	UNF. Carbon	
⚠	R760	QRD145J-100S	10	1/4W	UNF. Carbon	
⚠	R761	QRD145J-272S	2.7K	1/4W	UNF. Carbon	
⚠	R762	QRD145J-272S	2.7K	1/4W	UNF. Carbon	
⚠	R763	QRD145J-471S	470	1/4W	UNF. Carbon	
⚠	R764	QRD145J-471S	470	1/4W	UNF. Carbon	

⚠ Safety Parts

Resistors-(2)

⚠	Item No.	Part Number		Description		Areas
⚠	R765	ERF032K-R22			CEM	
⚠	R766	ERF032K-R22			CEM	
⚠	R769	QRG012J-100A	10	1W	O.M. Film	
⚠	R770	QRG012J-100A	10	1W	O.M. Film	
⚠	R771	QRG012J-470A	47	1W	O.M. Film	E
⚠	R772	QRG012J-470A	47	1W	O.M. Film	E
⚠	R773	QRZ0062-100	10		Fusible	E
⚠	R774	QRZ0062-100	10		Fusible	E
⚠	R775	QRZ0062-100	10		Fusible	E
⚠	R776	QRZ0062-100	10		Fusible	E
⚠	R779	QRD145J-100S	10	1/4W	UNF. Carbon	A
⚠	R779	QRD145J-100S	10	1/4W	UNF. Carbon	B
⚠	R779	QRD145J-100S	10	1/4W	UNF. Carbon	F
⚠	R779	QRZ0062-100	10		Fusible	C
⚠	R779	QRZ0062-100	10		Fusible	DBS
⚠	R779	QRZ0062-100	10		Fusible	E
⚠	R780	QRD145J-100S	10	1/4W	UNF. Carbon	
	R781	SDT250			Thermister	C
	R781	SDT250			Thermister	DBS
	R781	SDT250			Thermister	E
	R782	SDT250			Thermister	C
	R782	SDT250			Thermister	DBS
	R782	SDT250			Thermister	E
⚠	R801	QRD125J-271	270	1/2W	UNF. Carbon	
⚠	R802	QRD125J-271	270	1/2W	UNF. Carbon	
⚠	R803	QRD125J-271	270	1/2W	UNF. Carbon	
⚠	R804	QRD125J-271	270	1/2W	UNF. Carbon	
⚠	R805	QRD125J-181	180	1/2W	UNF. Carbon	
⚠	R806	QRD125J-181	180	1/2W	UNF. Carbon	
⚠	R807	QRD125J-181	180	1/2W	UNF. Carbon	
⚠	R809	QRD125J-392	3.9K	1/2W	UNF. Carbon	
⚠	R810	QRG022J-121A	120	2W	O.M. Film	
⚠	R811	QRG022J-121A	120	2W	O.M. Film	
⚠	R812	QRG022J-271A	270	2W	O.M. Film	
⚠	R813	QRG022J-271A	270	2W	O.M. Film	
⚠	R814	QRG022J-271A	270	2W	O.M. Film	
⚠	R815	QRD125J-332	3.3K	1/2W	UNF. Carbon	
⚠	R816	QRD145J-101S	100	1/4W	UNF. Carbon	A
⚠	R816	QRD145J-101S	100	1/4W	UNF. Carbon	B
⚠	R816	QRD145J-101S	100	1/4W	UNF. Carbon	F
⚠	R816	QRZ0062-101	100		Fusible	C
⚠	R816	QRZ0062-101	100		Fusible	DBS
⚠	R816	QRZ0062-101	100		Fusible	E
⚠	R817	QRZ0062-820	82		Fusible	C
⚠	R817	QRZ0062-820	82		Fusible	DBS
⚠	R817	QRZ0062-820	82		Fusible	E
⚠	R817	QRD145J-820S	82	1/4W	UNF. Carbon	A
⚠	R817	QRD145J-820S	82	1/4W	UNF. Carbon	B
⚠	R817	GRD145J-820S	82	1/4W	UNF. Carbon	F
⚠	R820	QRD125J-2R2	2.2	1/2W	UNF. Carbon	
⚠	R821	QRD125J-6R8	6.8	1/2W	UNF. Carbon	
⚠	R823	QRD125J-6R8	6.8	1/2W	UNF. Carbon	
	R825	QRD141J-822S	8.2K	1/4W	Carbon	C
	R825	QRD141J-822S	8.2K	1/4W	Carbon	DBS
	R825	QRD141J-822S	8.2K	1/4W	Carbon	E
	R826	QRD141J-222S	2.2K	1/4W	Carbon	C
	R826	QRD141J-222S	2.2K	1/4W	Carbon	DBS
	R826	QRD141J-222S	2.2K	1/4W	Carbon	E
⚠	R831	QRG022J-121A	120	2W	O.M. Film	
⚠	R832	QRG022J-121A	120	2W	O.M. Film	
⚠	R833	QRG022J-121A	120	2W	O.M. Film	
⚠	R834	QRG022J-470A	47	2W	O.M. Film	
⚠	R835	QRG022J-470A	47	2W	O.M. Film	
⚠	R836	QRD125J-6R8	6.8	1/2W	UNF. Carbon	
⚠	R837	QRD125J-392	3.9K	1/2W	UNF. Carbon	
⚠	R838	QRG022J-330A	33	2W	O.M. Film	
	R901	QRD141J-681S	680	1/4W	Carbon	
	R902	QRD141J-681S	680	1/4W	Carbon	
	R903	QRD141J-562S	5.6K	1/4W	Carbon	
	R904	QRD141J-562S	5.6K	1/4W	Carbon	
	R905	QRD141J-123S	12K	1/4W	Carbon	
	R906	QRD141J-123S	12K	1/4W	Carbon	
	R907	QRD141J-103S	10K	1/4W	Carbon	
	R908	QRD141J-332S	3.3K	1/4W	Carbon	
	R909	QRD141J-472S	4.7K	1/4W	Carbon	

Resistors-(3)

⚠	Item No.	Part Number	Description			Areas
	R910	QRD141J-563S	56K	1/4W	Carbon	
	R911	QRD141J-183S	18K	1/4W	Carbon	
	R912	QRD141J-683S	68K	1/4W	Carbon	
	R913	QRD141J-153S	15K	1/4W	Carbon	
	R914	QRD141J-224S	220K	1/4W	Carbon	
⚠	R915	QRD145J-470S	47	1/4W	UNF. Carbon	
	R917	QRD141J-682S	6.8K	1/4W	Carbon	
	R918	QRD141J-104S	100K	1/4W	Carbon	
	R919	QRD141J-104S	100K	1/4W	Carbon	
	R920	QRD141J-823S	82K	1/4W	Carbon	
	R921	QRD141J-563S	56K	1/4W	Carbon	
	R922	QRD141J-121S	120	1/4W	Carbon	
	R923	QRD141J-121S	120	1/4W	Carbon	
	R924	QRD141J-121S	120	1/4W	Carbon	
	R925	QRD141J-151S	150	1/4W	Carbon	
	R926	QRD141J-151S	150	1/4W	Carbon	
	R927	QRD141J-682S	6.8K	1/4W	Carbon	
⚠	R931	QRD125J-221	220	1/2W	UNF. Carbon	
⚠	R932	QRD125J-221	220	1/2W	UNF. Carbon	

Others

⚠	Item No.	Part Number	Description	Areas
		E11093-004	Circuit Board	A
		E11093-004	Circuit Board	B
		E11093-004	Circuit Board	C
		E11093-004	Circuit Board	E
		E11093-004	Circuit Board	F
		E11093-004BS	Circuit Board	DBS
		E302267-004	Heat Sink	
		E302654-002	Heatsink BKT	
		E302655-002	Heatsink BKT	
		E70945-H40B	Heat Sink	
		E70945-H40B	Heat Sink	
		E70945-H40B	Heat Sink	
⚠		QMC0437-002	AC Socket	A
⚠		QMC0437-002	AC Socket	B
⚠		QMC0440-001	AC Outlet	F
⚠		E45524-002	Fuse Clip	A
⚠		E45524-002	Fuse Clip	F
		EMB90TV-801A	Speaker Terminal	
		E65508-002	Tab	
⚠		EMG7331-001	Fuse Clip	C
⚠		EMG7331-001	Fuse Clip	DBS
⚠		EMG7331-001	Fuse Clip	E
		E67764-102	Wrapping Terminal	A
		E67764-102	Wrapping Terminal	F
		E67764-103	Wrapping Terminal	
		E67764-103	Wrapping Terminal	B
		E67764-202	Wrapping Terminal	A
		E67764-202	Wrapping Terminal	C
		E67764-202	Wrapping Terminal	D
		E67764-202	Wrapping Terminal	E
		E67764-202	Wrapping Terminal	F
		E67764-203	Terminal Ass'y	B
		E67764-203	Terminal Ass'y	C
		E67764-203	Terminal Ass'y	D
		E67764-203	Terminal Ass'y	E
		E67764-302	Wrapping Terminal	A
		E67764-302	Wrapping Terminal	B
		E67764-302	Wrapping Terminal	F
		E70859-001	Earth Plate	
	J901	QMS6302-128	Headphone Jack	
	P509	E04365-003	3P Socket	
	P802	E04365-006	6P Connector	
	RY901	ESK5D24-215	Relay	
	SW901	QST4261-E07	Push Switch	

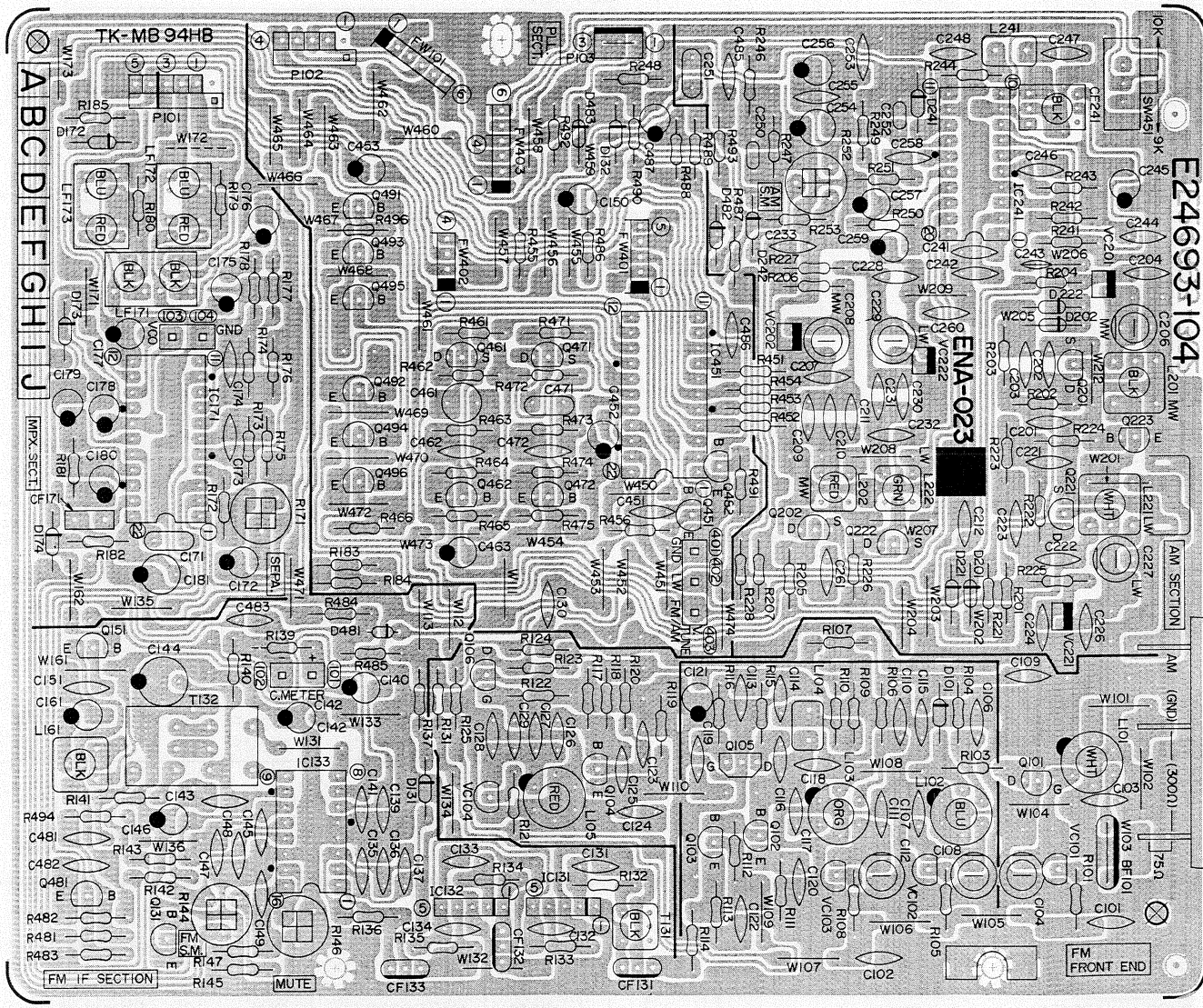
⚠Safety Parts

3-(2) ENA-023 □ Tuner P.C. Board Ass'y

Note: ENA-023 □ varies according to the areas employed. See note (1) when placing an order.

Note (1)

P.C. Board Ass'y	Designated Areas
ENA-023 [A]	U.S.A., Canada
ENA-023 [B]	U.S. Military Market Other Countries
ENA-023 [C]	Europe, Australia
ENA-023 [D]	Europe, U.K.
ENA-023 [E]	West Germany



Transistors

⚠	Item No.	Part Number	Description	Maker	Areas
	Q101	2SK359(E,F)	F.E.T.	Hitachi	
	Q102	2SC535(B)	Silicon	Hitachi	
	Q103	2SC461(B,C)	Silicon	Hitachi	
	Q104	2SC461(B,C)	Silicon	Hitachi	
	Q105	2SK161(GR)	F.E.T.	Toshiba	
	Q105	2SK161(GR)	F.E.T.	Toshiba	
	Q106	2SK168(E)	F.E.T.	Hitachi	
	Q131	DTC144N	Silicon		
	Q151	DTC144N	Silicon		
	Q201	2SK301(P,Q)	F.E.T.	Matsushita	
	Q202	2SK1015(H)	F.E.T.		D
	Q221	2SK1015(F,H)	F.E.T.		D
	Q222	2SK1015(H)	F.E.T.		D
	Q223	2SD655(E,F)	Silicon		D
	Q451	DTC114YN	Silicon		
	Q461	2SK301(Q1)	F.E.T	Matsushita	
	Q462	2SC1815(Y,GR)	Silicon	Toshiba	
	Q471	2SK105(1)	F.E.T.		D
	Q472	2SC1815(Y,GR)	Silicon		D
	Q481	2SC535(B)	Silicon	Hitachi	
	Q482	2SC1815(Y,GR)	Silicon	Toshiba	
	Q491	DTC144N	Silicon		
	Q492	DTA114YN	Silicon		
	Q493	DTC144N	Silicon		
	Q494	DTA114YN	Silicon		
	Q495	DTA114YN	Silicon		D
	Q496	DTA114YN	Silicon		D

ICs

⚠	Item No.	Part Number	Description	Maker	Areas
	IC131	BA401	I.C.		
	IC133	LA1235B	I.C.	Sanyo	
	IC171	LA3400	I.C.	Sanyo	
	IC241	LA1245	I.C.	Sanyo	
	IC451	TC9171P	I.C.	Toshiba	

Diodes

⚠	Item No.	Part Number	Description	Maker	Areas
	D101	1SS108	Silicon	Hitachi	
	D131	1S2473	Silicon		
	D132	1S2473	Silicon		
	D172	1S2473	Silicon		
	D173	1S2473	Silicon		
	D174	1S2473	Silicon		
	D175	1S2076-31	Silicon	Hitachi	
	D201	1S2473	Silicon		D
	D202	1S2473	Silicon		D
	D221	1S2473	Silicon		D
	D222	1S2473	Silicon		D
	D241	1SS108	Silicon	Hitachi	
	D242	1S2473	Silicon		
	D481	1S2222	Silicon	NEC	
	D482	1S2473	Silicon		
	D483	1S2473	Silicon		
	D484	1S2473	Silicon		
	VC103	SVC202(AB)	VARI Cap.		
	VC104	SVC202(AB)	VARI Cap.		
	VC201	KV1236Z	VARI Cap.		
	VC221	KV1236Z	VARI Cap.		D

Coils

⚠	Item No.	Part Number	Description	Maker	Areas
	L101	EQR2304-004	RF Coil		E
	L101	EQR2304-005	OSC Coil		A
	L101	EQR2304-005	OSC Coil		B
	L101	EQR2304-005	OSC Coil		C
	L101	EQR2304-005	OSC Coil		D
	L103	EQR2304-006	RF Coil		
	L104	EQL3001-1R5KY	Inductor		
	L105	EQR2404-004	RF Coil		
	L161	EQF0102-001	Filter		E
	L201	EQR1111-006	RF Coil		
	L202	EQR1207-003	RF Coil		
	L241	EQL3001-102KY	Inductor		
	T131	EQT2121-005	I.F.T.		
	T132	EQT2140-003	I.F.T.		

Capacitors

⚠	Item No.	Part Number	Description			Areas
	C101	QCF31HP-223	0.022MF	50V	Ceramic	
	C102	QCF31HP-223	0.022MF	50V	Ceramic	
	C103	QCF31HP-223	0.022MF	50V	Ceramic	E
	C104	ENZ1003-002			Trimmer	
	C110	QCF31HP-103	0.01MF	50V	Ceramic	
	C111	QCS31HJ-120	12PF	50V	Ceramic	
	C112	ENZ1003-002			Trimmer	
	C113	QCF31HP-103	0.01MF	50V	Ceramic	
	C114	QCS31HJ-151	150PF	50V	Ceramic	
	C115	QCF31HP-103	0.01MF	50V	Ceramic	
	C116	QCS31HJ-5RO	5RPF	50V	Ceramic	A
	C116	QCS31HJ-5RO	5RPF	50V	Ceramic	B
	C116	QCS31HJ-5RO	5RPF	50V	Ceramic	C
	C116	QCS31HJ-5RO	5RPF	50V	Ceramic	D
	C116	QCS31HJ-7RO	7RPF	50V	Ceramic	E
	C117	QCS31HJ-2RO	2RPF	50V	Ceramic	
	C119	QCS31HJ-4RO	4RPF	50V	Ceramic	
	C119	QCS31HJ-4RO	4RPF	50V	Ceramic	
	C120	QCF31HP-103	0.01MF	50V	Ceramic	
	C121	QETC1CM-476	47MF	16V	Electro	
	C122	QCF31HP-223	0.022MF	50V	Ceramic	
	C123	QCF31HP-103	0.01MF	50V	Ceramic	
	C124	QCT25UJ-100	10PF	50V	Ceramic	
	C125	QCT25UJ-220	220PF	50V	Ceramic	
	C126	QCS31HJ-7RO	7RPF	50V	Ceramic	
	C127	QCT25UJ-5RO	5RPF	50V	Ceramic	
	C128	QCT25UJ-5RO	5RPF	50V	Ceramic	
	C129	QCT25CH-2RO	2RPF	50V	Ceramic	
	C130	QCF31HP-103	0.01MF	50V	Ceramic	
	C131	QCF31HP-223	0.022MF	50V	Ceramic	
	C132	QCF31HP-223	0.022MF	50V	Ceramic	
	C135	QCF31HP-223	0.022MF	50V	Ceramic	
	C136	QCF31HP-223	0.022MF	50V	Ceramic	
	C137	QCF31HP-223	0.022MF	50V	Ceramic	
	C138	QET61HM-475	4.7MF	50V	Electro	
	C139	QCS31HJ-121	120PF	50V	Ceramic	A
	C139	QCS31HJ-121	120PF	50V	Ceramic	B
	C139	QCS31HJ-121	120PF	50V	Ceramic	C
	C139	QCS31HJ-121	120PF	50V	Ceramic	D
	C139	QCS31HJ-470	47PF	50V	Ceramic	E
	C140	QET61HM-225	2.2MF	50V	Electro	
	C141	QCF31HP-223	0.022MF	50V	Ceramic	
	C142	QET61HM-105	1MF	50V	Electro	
	C143	QCF31HP-223	0.022MF	50V	Ceramic	
	C144	QETC1AM-227	220MF	10V	Electro	
	C145	QCF31HP-223	0.022MF	50V	Ceramic	
	C146	QETC1CM-476	47MF	16V	Electro	
	C147	QCF31HP-223	0.022MF	50V	Ceramic	
	C148	QCF31HP-223	0.022MF	50V	Ceramic	
	C149	QCF31HP-223	0.022MF	50V	Ceramic	

Capacitors-(2)

⚠	Item No.	Part Number	Description			Areas
	C150	QET61HM-105	1MF	50V	Electro	
	C151	QCY31HK-102	1000PF	50V	Ceramic	
	C161	QET61EM-106	10MF	25V	Electro	E
	C171	QFN81HK-473	0.047MF	50V	Mylay	
	C172	QET61EM-106	10MF	25V	Electro	
	C173	QCS31HJ-271	270PF	50V	Ceramic	C
	C173	QCS31HJ-271	270PF	50V	Ceramic	D
	C173	QCS31HJ-271	270PF	50V	Ceramic	E
	C173	QCS31HJ-561	560PF	50V	Ceramic	A
	C173	QCS31HJ-561	560PF	50V	Ceramic	B
	C174	QCS31HJ-271	270PF	50V	Ceramic	C
	C174	QCS31HJ-271	270PF	50V	Ceramic	D
	C174	QCS31HJ-271	270PF	50V	Ceramic	E
	C174	QCS31HJ-561	560PF	50V	Ceramic	A
	C174	QCS31HJ-561	560PF	50V	Ceramic	B
	C175	QET61HM-475	4.7MF	50V	Electro	
	C176	QET61HM-475	4.7MF	50V	Electro	
	C177	QET61HM-105	1MF	50V	Electro	
	C178	QET61HM-105	1MF	50V	Electro	
	C179	QEN51HM-474	0.47MF	50V	Nonpole	
	C180	QEN61HM-105	1MF	50V	Nonpole	
	C181	QETC1CM-107	100MF	16V	Electro	
	C201	QCF31HP-223	0.022MF	50V	Ceramic	
	C202	QCS31HJ-561	560PF	50V	Ceramic	
	C203	QCF31HP-223	0.022MF	50V	Ceramic	
	C204	QCC31EM-473	0.047MF	25V	Ceramic	
	C205	QCS31HJ-5RO	5RPF	50V	Ceramic	
	C206	ENZ1002-006			Trimmer	
	C207	QCT25CH-100	10PF	50V	Ceramic	
	C208	ENZ1003-006			Trimmer	
	C209	QCT25CH-221	220PF	50V	Ceramic	
	C210	QCT25CH-221	220PF	50V	Ceramic	
	C211	QCT25CH-560	56PF	50V	Ceramic	
	C212	QCF31HP-223	0.022MF	50V	Ceramic	
	C221	QCF31HP-223	0.022MF	50V	Ceramic	D
	C222	QCY31HK-272	2700PF	50V	Ceramic	D
	C223	QCF31HP-223	0.022MF	50V	Ceramic	D
	C224	QCC31EM-473	0.047PF	25V	Ceramic	D
	C226	QCS31HJ-470	47PF	50V	Ceramic	D
	C227	ENZ1003-006			Trimmer	D
	C228	QCT25CH-820	82PF	16V	Ceramic	D
	C229	ENZ1003-006			Trimmer	D
	C230	QCT25CH-101	100PF	16V	Ceramic	D
	C231	QCT25CH-101	100PF	16V	Ceramic	D
	C232	QCT25CH-100	10PF	16V	Ceramic	D
	C233	QCF31HP-223	0.022MF	50V	Ceramic	D
	C241	QCY31HK-102	1000PF	50V	Ceramic	
	C242	QCF31HP-223	0.022MF	50V	Ceramic	
	C243	QCF31HP-223	0.022MF	50V	Ceramic	
	C244	QCF31HP-223	0.022MF	50V	Ceramic	
	C245	QET61EM-106	10MF	25V	Electro	
	C246	QCF31HP-223	0.022MF	50V	Ceramic	
	C247	QCS31HJ-121	120PF	50V	Ceramic	
	C248	QCY31HK-102	1000PF	50V	Ceramic	
	C249	QEN31HK-103	0.01MF	50V	Mylar	
	C250	QFN31HK-103	0.01MF	50V	Mylar	
	C251	QFN31HK-473	0.047MF	50V	Mylar	
	C252	QFN31HK-103	0.01MF	50V	Mylar	
	C253	QCF31HP-223	0.022MF	50V	Ceramic	
	C254	QETC1CM-476	47MF	16V	Electro	
	C255	QCF31HP-223	0.022MF	50V	Ceramic	
	C256	QET61HM-475	4.7MF	50V	Electro	
	C257	QET61HM-105	1MF	50V	Electro	
	C258	QCF31HP-223	0.022MF	50V	Ceramic	
	C259	QET61HM-475	4.7MF	50V	Electro	
	C260	QCF31HP-223	0.022MF	50V	Ceramic	
	C261	QCF31HP-223	0.022MF	50V	Ceramic	
	C451	QCS21HJ-331	330PF	50V	Ceramic	
	C452	QETC0JM-227	220MF	6.3V	Electro	
	C453	QET61HM-474	0.47MF	50V	Electro	A
	C453	QET61HM-474	0.47MF	50V	Electro	B
	C453	QET61HM-474	0.47MF	50V	Electro	C
	C453	QET61HM-474	0.47MF	50V	Electro	D
	C453	QET61HM-474	0.47MF	50V	Electro	E
	C461	QEN61HM-225	2.2MF	50V	Nonpole	

Capacitors

	Item No.	Part Number	Description			Areas
	C462	QCY31HK-102	1000PF	50V	Ceramic	
	C463	QETC1CM-476	47MF	16V	Electro	
	C481	QCS31HJ-470	47PF	50V	Ceramic	
	C482	QCF31HP223	0.022MF	50V	Ceramic	
	C483	QCF31HP-223	0.022MF	50V	Ceramic	
	C484	QCS31HJ-470	47PF	50V	Ceramic	
	C486	QCF31HP-223	0.022MF	50V	Ceramic	
	C487	QET61HM-474	0.47MF	50V	Electro	

Resistors

⚠	Item No.	Part Number	Description			Areas
	R101	QRD141J-473S	47K	1/4W	Carbon	
	R102	QRD141J-330S	33	1/4W	Carbon	
	R103	QRD141J-330S	33	1/4W	Carbon	A
	R103	QRD141J-330S	33	1/4W	Carbon	B
	R103	QRD141J-330S	33	1/4W	Carbon	C
	R103	QRD141J-330S	33	1/4W	Carbon	D
	R103	QRD141J-470S	47	1/4W	Carbon	E
	R106	QRD141J-470S	47	1/4W	Carbon	A
	R106	QRD141J-470S	47	1/4W	Carbon	B
	R106	QRD141J-470S	47	1/4W	Carbon	C
	R106	QRD141J-470S	47	1/4W	Carbon	D
	R106	QRD141J-270S	27	1/4W	Carbon	E
	R107	QRD141J-221S	220	1/4W	Carbon	
	R108	QRD141J-473S	47K	1/4W	Carbon	
	R109	QRD141J-332S	3.3K	1/4W	Carbon	
	R110	QRD141J-223S	22K	1/4W	Carbon	
	R111	QRD141J-102S	1K	1/4W	Carbon	
	R112	QRD141J-102S	1K	1/4W	Carbon	
	R113	QRD141J-332S	3.3K	1/4W	Carbon	
	R114	QRD141J-221S	220	1/4W	Carbon	
	R115	QRD141J-331S	330	1/4W	Carbon	
	R116	QRD141J-104S	100K	1/4W	Carbon	
	R117	QRD141J-682S	6.8K	1/4W	Carbon	
	R118	QRD141J-103S	10K	1/4W	Carbon	
	R119	QRD141J-222S	2.2K	1/4W	Carbon	
	R120	QRD141J-102S	1K	1/4W	Carbon	
	R121	QRD141J-472S	4.7K	1/4W	Carbon	
	R122	QRD141J-104S	100K	1/4W	Carbon	
	R123	QRD141J-331S	330	1/4W	Carbon	
⚠	R124	QRD145J-560S	56	1/4W	UNF. Carbon	
	R125	QRD141J-223S	22K	1/4W	Carbon	
	R131	QRD145J-560S	56	1/4W	Carbon	
	R132	QRD141J-181S	180	1/4W	Carbon	C
	R132	QRD141J-181S	180	1/4W	Carbon	D
	R132	QRD141J-181S	180	1/4W	Carbon	E
	R132	QRD141J-271S	270	1/4W	Carbon	A
	R132	QRD141J-271S	270	1/4W	Carbon	B
	R133	QRD141J-331S	330	1/4W	Carbon	A
	R133	QRD141J-331S	330	1/4W	Carbon	B
	R133	QRD141J-391S	390	1/4W	Carbon	C
	R133	QRD141J-391S	390	1/4W	Carbon	D
	R133	QRD141J-391S	390	1/4W	Carbon	E
	R136	QRD141J-331S	330	1/4W	Carbon	A
	R136	QRD141J-331S	330	1/4W	Carbon	B
	R136	QRD141J-391S	390	1/4W	Carbon	C
	R136	QRD141J-391S	390	1/4W	Carbon	D
	R136	QRD141J-391S	390	1/4W	Carbon	E
	R137	QRD141J-103S	10K	1/4W	Carbon	
	R138	QRD141J-223S	22K	1/4W	Carbon	
	R139	QRD141J-391S	390	1/4W	Carbon	
	R140	QRD141J-153S	15K	1/4W	Carbon	
	R141	QRD141J-332S	3.3K	1/4W	Carbon	
⚠	R142	QRZ0062-680	68		Fusible	C
⚠	R142	QRZ0062-680	68		Fusible	D
⚠	R142	QRZ0062-680	68		Fusible	E
⚠	R142	QRD145J-680S	68	1/4W	UNF. Carbon	A
⚠	R142	QRD145J-680S	68	1/4W	UNF. Carbon	B
	R143	QRD141J-223S	22K	1/4W	Carbon	
	R144	QVP4A0B-103			Valiable	
	R145	QRD141J-332S	3.3K	1/4W	Carbon	

⚠ Safety Parts

Resistors-(2)

⚠	Item No.	Part Number	Description			Areas
	R146	QVP4A0B-473			Variable	
	R147	QRD141J-104S	100K	1/4W	Carbon	
	R161	QRD141J-103S	10K	1/4W	Carbon	
	R161	QRD141J-103S	10K	1/4W	Carbon	
	R171	QVP4A0B-473			Variable	
	R172	QRD141J-103S	10K	1/4W	Carbon	C
	R172	QRD141J-103S	10K	1/4W	Carbon	D
	R172	QRD141J-103S	10K	1/4W	Carbon	E
	R172	QRD141J-223S	22K	1/4W	Carbon	A
	R172	QRD141J-223S	22K	1/4W	Carbon	B
	R173	QRD141J-134S	130K	1/4W	Carbon	A
	R173	QRD141J-134S	130K	1/4W	Carbon	B
	R173	QRD141J-184S	180K	1/4W	Carbon	C
	R173	QRD141J-184S	180K	1/4W	Carbon	D
	R173	QRD141J-184S	180K	1/4W	Carbon	E
	R174	QRD141J-134S	130K	1/4W	Carbon	A
	R174	QRD141J-134S	130K	1/4W	Carbon	B
	R174	QRD141J-184S	180K	1/4W	Carbon	C
	R174	QRD141J-184S	180K	1/4W	Carbon	D
	R174	QRD141J-184S	180K	1/4W	Carbon	E
	R175	QRD141J-184S	180K	1/4W	Carbon	A
	R175	QRD141J-184S	180K	1/4W	Carbon	B
	R175	QRD141J-224S	220K	1/4W	Carbon	C
	R175	QRD141J-224S	220L	1/4W	Carbon	D
	R175	QRD141J-224S	220K	1/4W	Carbon	E
	R176	QRD141J-184S	180K	1/4W	Carbon	A
	R176	QRD141J-184S	180K	1/4W	Carbon	B
	R176	QRD141J-224S	220K	1/4W	Carbon	C
	R176	QRD141J-224S	220K	1/4W	Carbon	D
	R176	QRD141J-224S	220K	1/4W	Carbon	E
	R177	QRD141J-332S	3.3K	1/4W	Carbon	
	R178	QRD141J-332S	3.3K	1/4W	Carbon	
	R179	QRD141J-682S	6.8K	1/4W	Carbon	
	R180	QRD141J-682S	6.8K	1/4W	Carbon	
	R181	QRD141J-332S	3.3K	1/4W	Carbon	
⚠	R182	QRZ0062-680	68		Fusible	C
⚠	R182	QRZ0062-680	68		Fusible	D
⚠	R182	QRZ0062-680	68		Fusible	E
⚠	R182	QRD145J-680S	68	1/4W	UNF. Carbon	A
⚠	R182	QRD145J-680S	68	1/4W	UNF. Carbon	B
	R183	QRD141J-103S	10K	1/4W	Carbon	
	R184	QRD141J-103S	10K	1/4W	Carbon	
	R185	QRD141J-104S	100K	1/4W	Carbon	
	R201	QRD141J-331S	330	1/4W	Carbon	
	R202	QRD141J-471S	470	1/4W	Carbon	
	R203	QRD141J-103S	10K	1/4W	Carbon	D
	R204	QRD141J-103S	10K	1/4W	Carbon	
	R205	QRD141J-103S	10K	1/4W	Carbon	D
	R206	QRD141J-473S	47K	1/4W	Carbon	
	R207	QRD141J-472S	4.7K	1/4W	Carbon	
	R208	QRD141J-470S	47	1/4W	Carbon	A
	R208	QRD141J-470S	47	1/4W	Carbon	B
	R208	QRD141J-470S	47	1/4W	Carbon	C
	R208	QRD141J-470S	47	1/4W	Carbon	E
	R221	QRD141J-331	330	1/4W	Carbon	D
	R222	QRD141J-471	470	1/4W	Carbon	D
	R223	QRD141J-103	10K	1/4W	Carbon	D
	R224	QRD141J-472	47K	1/4W	Carbon	D
	R225	QRD141J-103	10K	1/4W	Carbon	D
	R226	QRD141J-103	10K	1/4W	Carbon	D
	R227	QRD141J-473	47K	1/4W	Carbon	D
	R228	QRD141J-472	47K	1/4W	Carbon	D
	R242	QRD141J-331S	330	1/4W	Carbon	
	R243	QRD141J-102S	1K	1/4W	Carbon	
	R244	QRD141J-221S	220	1/4W	Carbon	

Resistors-(3)

⚠	Item No.	Part Number	Description			Areas
	R245	QRD141J-103S	10K	1/4W	Carbon	
	R246	QRD141J-682S	6.8K	1/4W	Carbon	
	R247	QRD141J-332S	3.3K	1/4W	Carbon	
⚠	R248	QRZ0062-680	68		Fusible	C
⚠	R248	QRZ0062-680	68		Fusible	D
⚠	R248	QRZ0062-680	68		Fusible	E
⚠	R248	QRD145J-680S	68	1/4W	UNF. Carbon	A
⚠	R248	QRD145J-680S	68	1/4W	UNF. Carbon	B
	R249	QRD141J-103S	10K	1/4W	Carbon	
	R250	QRD141J-103S	10K	1/4W	Carbon	
	R251	QRD141J-221S	220	1/4W	Carbon	
	R252	QVP4A0B-103			Variable	
	R253	QRD141J-332S	3.3K	1/4W	Carbon	
	R451	QRD148J-275S	2.7M	1/4W	Carbon	
	R452	QRD141J-104S	100K	1/4W	Carbon	
	R453	QRD141J-104S	100K	1/4W	Carbon	
	R454	QRD141J-104S	100K	1/4W	Carbon	
	R455	QRD141J-101S	100	1/4W	Carbon	
	R456	QRD141j-473S	47K	1/4W	Carbon	
	R461	QRD141J-222S	2.2K	1/4W	Carbon	
	R462	QRD141J-102S	1K	1/4W	Carbon	
	R463	QRD141J-152S	1.5K	1/4W	Carbon	
	R464	QRD141J-271S	270	1/4W	Carbon	
	R465	QRD141J-472S	4.7K	1/4W	Carbon	
⚠	R466	QRZ0062-680	68		Fusible	C
⚠	R466	QRZ0062-680	68		Fusible	D
⚠	R466	QRZ0062-680	68		Fusible	E
⚠	R466	QRD145J-680S	68	1/4W	UNF. Carbon	A
⚠	R466	QRD145J-680S	68	1/4W	UNF. Carbon	B
	R481	QRD141J-104S	100K	1/4W	Carbon	
	R482	QRD141J-221S	220	1/4W	Carbon	
	R483	QRD141J-332S	3.3K	1/4W	Carbon	
	R484	QRD141J-472S	4.7K	1/4W	Carbon	
	R485	QRD141J-223S	22K	1/4W	Carbon	
	R486	QRD141J-472S	4.7K	1/4W	Carbon	
	R487	QRD141J-223S	22K	1/4W	Carbon	
	R488	QRD141J-104S	100K	1/4W	Carbon	
	R489	QRD141J-473S	47K	1/4W	Carbon	
	R490	QRD141J-103S	10K	1/4W	Carbon	
	R491	QRD141J-332S	3.3K	1/4W	Carbon	
	R492	QRD141J-104S	100K	1/4W	Carbon	
	R493	QRD141J-682S	6.8K	1/4W	Carbon	
	R494	QRD141J-473S	47K	1/4W	Carbon	

⚠Safety Parts

Others

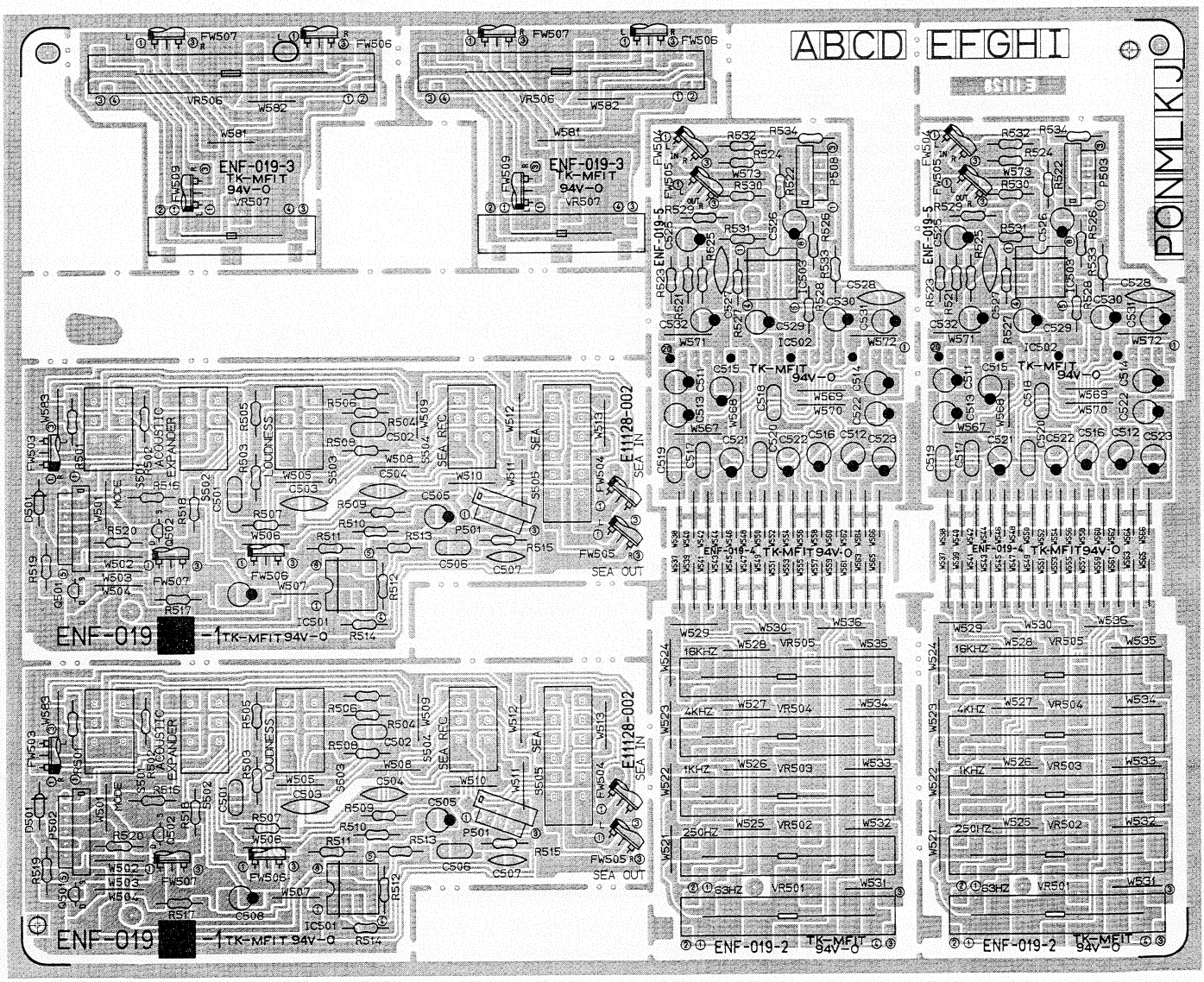
⚠	Item No.	Part Number	Description	Areas
		E67764-202	W. Terminal	A
		E67764-202	W. Terminal	B
		E67764-202	W. Terminal	C
		E67764-202	W. Terminal	D
		E67764-003	W. Terminal	E
		E24693-104	Circuit Board	A
		E24693-104	Circuit Board	B
		E24693-104	Circuit Board	C
		E24693-104	Circuit Board	D
		E24693-302	Circuit Board	E
		E70225-001	Earth Plate	
		E70859-001	Earth Plate	
		E69328-001	Shield Cover	
	P101	E04365-003	3P Socket	E
	P101	E04365-005	F.W. Socket	A
	P101	E04365-005	F.W. Socket	B
	P101	E04365-005	F.W. Socket	C
	P101	E04365-005	F.W. Socket	D
	P102	E04365-004	Jamper Socket	
	P103	QMV5005-003K	3P Plag Assy	
	BF101	EQF0201-004	Filter	E
	CF131	ECB2118-001R	Ceramic Filter	C
	CF131	ECB2118-001R	Ceramic Filter	D
	CF131	ECB2118-001R	Ceramic Filter	E
	CF131	ECB2123-002R	Ceramic Filter	A
	CF131	ECB2123-002R	Ceramic Filter	B
	CF133	ECB2118-001R	Ceramic Filter	C
	CF133	ECB2118-001R	Ceramic Filter	D
	CF133	ECB2118-001R	Ceramic Filter	E
	CF133	ECB2123-002R	Ceramic Filter	A
	CF133	ECB2123-002R	Ceramic Filter	B
	CF171	ECX0000-456KS	Resonator	
	CF241	ECB1560-001	Ceramic Filter	
	LF171	EQF0101-002	Filter	
	SW401	QSS1201-039	Slide Switch	
	VC101	SVC202(AB)	V. Cap. Diode	
		EMB01YV-201A	Antenna Terminal	E
		E03572-016	Terminal Board	A
		E03572-016	Terminal Board	B
		E03572-016	Terminal Board	C
		E03572-016	Terminal Board	D
		E67764-002	Terminal Ass'y	
		E67764-002	Terminal Ass'y	

3-(4) ENF-019 □ SEA & Switch P.C. Board Ass'y

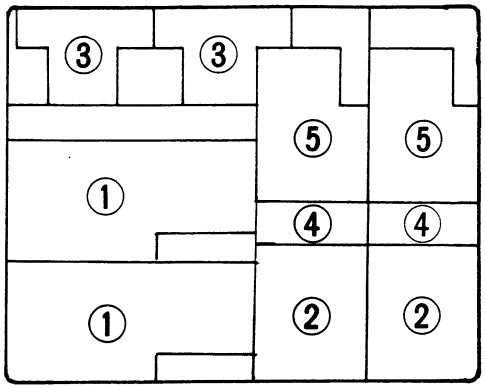
Note: ENF-019 □ varies according to the areas employed. See note (1) when placing an order.

Note (1)

P.C. Board Ass'y	Designated Areas
ENF-019 [A]	U.S.A., Canada U.S. Military Market & Other Countries
ENF-019 [B]	Europe, Australia West Germany, U.K.



Each Individual P.C. Board Location



① ENF-019-1 Switches & Accoustic Expander P.C. Board
② ENF-019-2 SEA P.C. Board
③ ENF-019-3 Volume & Balance P.C. Board
④ ENF-019-4
⑤ ENF-019-5 SEA P.C. Board

Transistors

⚠	Item No.	Part Number	Description	Maker	Areas
	Q501	2SK301(Q)	Silicon	Matsushita	
	Q502	2SK301(Q)	Silicon	Matsushita	

ICs

⚠	Item No.	Part Number	Description	Maker	Areas
	IC501	M5218P	I.C.	Ryoyo	
	IC502	SAB2-024	I.C.	Alps	
	IC503	NJM4560D-X	I.C.	Dainichi	

Diodes

⚠	Item No.	Part Number	Description	Maker	Areas
	D501	1S2473	Silicon		

Capacitors

⚠	Item No.	Part Number	Description			Areas
	C501	QFN31HK-183	0.018MF	50V	Mylar	
	C502	QFN31HK-183	0.018MF	50V	Mylar	
	C503	QCS31HJ-181	180PF	50V	Ceramic	
	C504	QCS31HJ-181	180PF	50V	Ceramic	
	C505	QET61HM-105	1MF	50V	Electro	
	C506	QFN31HJ-472	4700PF	50V	Mylar	
	C507	QCS31HJ-271	270PF	50V	Ceramic	
	C508	QET61EM-106	10MF	25V	Electro	
	C511	QETC1HM-475	4.7MF	50V	Electro	
	C512	QETC1HM-475	4.7MF	50V	Electro	
	C513	QETC1HM-105	1MF	50V	Electro	
	C514	QETC1HM-105	1MF	50V	Electro	
	C515	QEB61HM-334	0.33MF	50V	Electro	
	C516	QEB61HM-334	0.33MF	50V	Electro	
	C517	QFN31HK-683	0.068MF	50V	Mylar	
	C518	QFN31HK-683	0.068MF	50V	Mylar	
	C519	QFN31HK-183	0.018MF	50V	Mylar	
	C520	QFN31HK-183	0.018MF	50V	Mylar	
	C521	QETC1CM-476	47MF	16V	Electro	
	C522	QETC1CM-476	47MF	16V	Electro	
	C523	QETC1CM-476	47MF	16V	Electro	
	C524	QETC1CM-476	47MF	16V	Electro	
	C525	QETC1HM-475	4.7MF	50V	Electro	
	C526	QETC1HM-475	4.7MF	50V	Electro	
	C527	QCS31HJ-470	47PF	50V	Ceramic	
	C528	QCS31HJ-470	47PF	50V	Ceramic	
	C529	QETC1HM-475	4.7MF	50V	Electro	
	C530	QETC1HM-475	4.7MF	50V	Electro	
	C531	QETC1HM-226	22MF	50V	Electro	
	C532	QETC1HM-226	22MF	50V	Electro	

Resistors

⚠	Item No.	Part Number	Description			Areas
	R501	QRD141J-332S	3.3K	1/4W	Carbon	
	R502	QRD141J-332S	3.3K	1/4W	Carbon	
	R503	QRD141J-683S	68K	1/4W	Carbon	
	R504	QRD141J-683S	68K	1/4W	Carbon	
	R505	QRD141J-223S	22K	1/4W	Carbon	
	R506	QRD141J-223S	22K	1/4W	Carbon	
	R507	QRD141J-564S	560K	1/4W	Carbon	
	R508	QRD141J-564S	560K	1/4W	Carbon	
	R509	QRD141J-332S	3.3K	1/4W	Carbon	
	R510	QRD141J-474S	470K	1/4W	Carbon	
	R511	QRD141J-474S	470K	1/4W	Carbon	
	R512	QRD141J-223S	22K	1/4W	Carbon	
	R513	QRD141J-104S	100K	1/4W	Carbon	
	R514	QRD141J-394S	390K	1/4W	Carbon	
	R515	QRD141J-154S	150K	1/4W	Carbon	
	R516	QRD141J-474S	470K	1/4W	Carbon	
	R517	QRD141J-332S	3.3K	1/4W	Carbon	
	R518	QRD141J-332S	3.3K	1/4W	Carbon	
	R519	QRD141J-103S	10K	1/4W	Carbon	
	R520	QRD141J-103S	10K	1/4W	Carbon	
	R521	QRD141J-104S	100K	1/4W	Carbon	
	R522	QRD141J-104S	100K	1/4W	Carbon	
	R523	QRD141J-104S	100K	1/4W	Carbon	
	R524	QRD141J-104S	100K	1/4W	Carbon	
	R525	QRD141J-102S	1K	1/4W	Carbon	
	R526	QRD141J-102S	1K	1/4W	Carbon	
	R527	QRD141J-332S	3.3K	1/4W	Carbon	
	R528	QRD141J-332S	3.3K	1/4W	Carbon	
	R529	QRD141J-331S	330	1/4W	Carbon	
	R530	QRD141J-331S	330	1/4W	Carbon	
	R531	QRD141J-224S	220K	1/4W	Carbon	
	R532	QRD141J-224S	220K	1/4W	Carbon	
⚠	R533	QRD145J-330S	33	1/4W	UNF. Carbon	A
⚠	R533	QRZ0062-330	33		Fusible	B
⚠	R534	QRD145J-330S	33	1/4W	UNF. Carbon	A
⚠	R534	QRZ0062-330	33		Fusible	B
	VR501	QVUB01W-E15B			Variable	
	VR502	QVUB01W-E15B			Variable	
	VR503	QVUB01W-E15B			Variable	
	VR504	QVUB01W-E15B			Variable	
	VR505	QVUB01W-E15B			Variable	
	VR506	QVUB01B-EF5B			Variable	
	VR507	QVWA01W-EF5C			Variable	

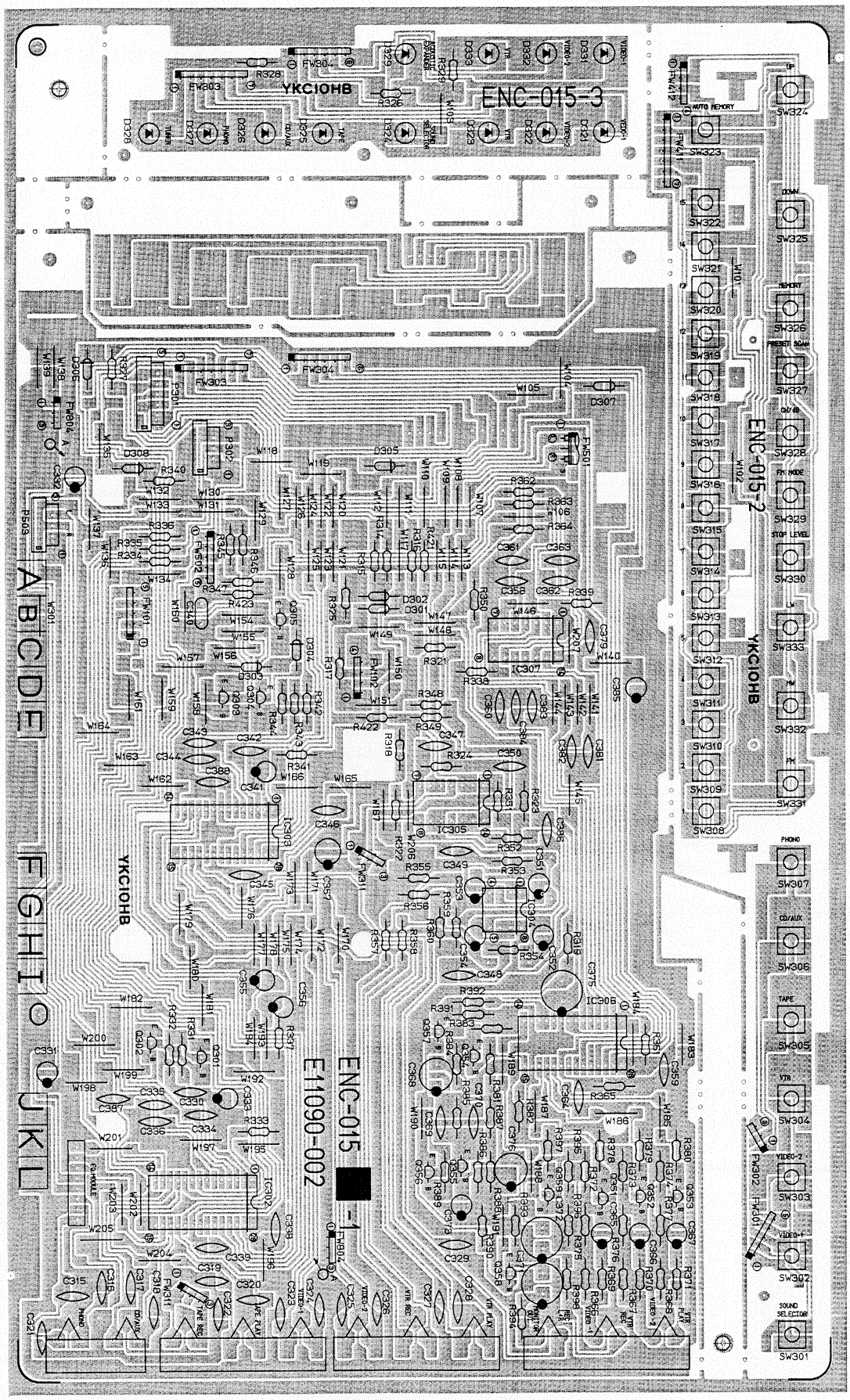
Others

	Item No.	Part Number	Description	Areas
		E11128-001	Circuit Board	
	P501	E04365-003	3P Socket	
	P502	E04365-005	Flat Wire Socket	
	P508	E04365-003	3P Socket	
	S501	QST4361-E07	Push Switch	
	S504	QST4261-E09	Push SW	

⚠ Safety Parts

3-(5) ENC-015□ Source Selector P.C. Board Ass'y

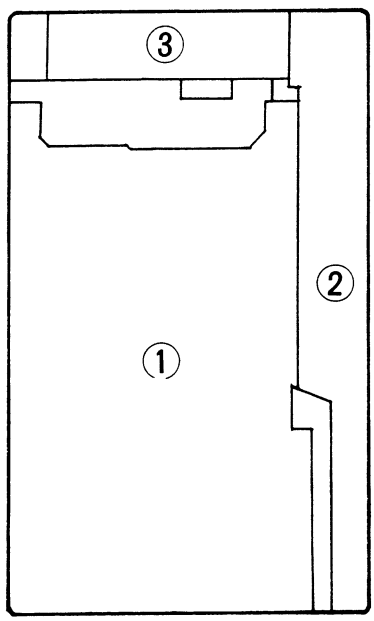
Note: ENC-015□ varies according to the areas employed. See note (1) when placing an order.



Note (1)

P.C. Board Ass'y	Designated Areas
ENC-015 [A]	U.S.A., Canada U.S. Military Market & Other Countries
ENC-015 [B]	Europe, Australia
ENC-015 [C]	West Germany
ENC-015 [D]	Europe, U.K.

Each Individual P.C. Board Location



(1) ENC-015-1 Source Select P.C. Board
(2) ENC-015-2 Tact Switches P.C. Board
(3) ENC-015-3 L.E.D. Indicators P.C. Board

Transistors

⚠	Item No.	Part Number	Description	Areas
			Maker	
	Q301	DTA114YN	Silicon	
	Q302	DTC144EN	Silicon	
	Q303	DTC114YN	Silicon	
	Q304	DTC114YN	Silicon	
	Q305	DTA114YN	Silicon	
	Q351	2SC458(C,D)	Silicon Hitachi	
	Q352	2SC458(C,D)	Silicon Hitachi	
	Q353	2SC458(C,D)	Silicon Hitachi	
	Q354	2SC458(C,D)	Silicon Hitachi	
	Q355	2SC458(C)	Silicon Hitachi	
	Q356	2SC458(C,D)	Silicon Hitachi	
	Q357	2SC458(C,D)	Silicon Hitachi	
	Q358	2SC458(C,D)	Silicon Hitachi	
	Q359	2SC458(C,D)	Silicon Hitachi	

ICs

⚠	Item No.	Part Number	Description	Areas
			Maker	
	IC302	LC7815H	I.C. Sanyo	
	IC303	LC7815H	I.C. Sanyo	
	IC304	M5218P	I.C. Ryoyo	
	IC305	MN4016B	I.C. Matsushita	
	IC306	LC7815H	I.C. Sanyo	
	IC307	TC4081BP	I.C. Toshiba	

Diodes

⚠	Item No.	Part Number	Description	Areas
			Maker	
	D301	1S2473	Silicon	
	D302	1S2473	Silicon	
	D303	1S2473	Silicon	
	D304	1S2473	Silicon	
	D305	1S2473	Silicon	
	D306	1S2473	Silicon	
	D307	1S2473	Silicon	
	D308	1S2473	Silicon	
	D321	SLR-55DC50F	L.E.D.	
	D322	SLR-55DC50F	L.E.D.	
	D323	SLR-55DC50F	L.E.D.	
	D324	SLR-55VC50F	L.E.D.	
	D325	SLR-55DC50F	L.E.D.	
	D326	SLR-55DC50F	L.E.D.	
	D327	SLR-55DC50F	L.E.D.	
	D328	SLR-55DC50F	L.E.D.	
	D329	SLR-55MC50F	L.E.D.	
	D331	SLR-55YC50F124	L.E.D.	
	D332	SLR-55YC50F124	L.E.D.	
	D333	SLR-55YC50F124	L.E.D.	

Capacitors

⚠	Item No.	Part Number	Description			Areas
	C321	QCF31HP-223	0.022MF	50V	Ceramic	
	C322	QCF31HP-223	0.022MF	50V	Ceramic	
	C331	QETC1CM-226	22MF	16V	Electro	
	C332	QETC1CM-226	22MF	16V	Electro	
	C333	QETC1HM-105	1MF	50V	Electro	
	C333	QCS31HJ-101	100PF	50V	Ceramic	
	C335	QCS31HJ-101	100PF	50V	Ceramic	
	C336	QCS31HJ-101	100PF	50V	Ceramic	
	C338	QCF31HP-223	0.022MF	50V	Ceramic	
	C339	QCF31HP-223	0.022MF	50V	Ceramic	
	C341	QETC1HM-105	1MF	50V	Electro	
	C342	QCS31HJ-101	100PF	50V	Ceramic	
	C343	QCS31HJ-101	100PF	50V	Ceramic	
	C344	QCS31HJ-101	100PF	50V	Ceramic	
	C345	QCF31HP-223	0.022MF	50V	Ceramic	
	C346	QCF31HP-223	0.022MF	50V	Ceramic	
	C347	QCF31HP-223	0.022MF	50V	Ceramic	
	C350	QCF31HP-223	0.022MF	50V	Ceramic	
	C351	QETC1HM-105	1MF	50V	Electro	
	C352	QETC1HM-105	1MF	50V	Electro	
	C353	QETC1EM-106	10MF	25V	Electro	
	C354	QETC1EM-106	10MF	25V	Electro	
	C357	QETC1CM-476	47MF	16V	Electro	
	C359	QCF31HP-223	0.022MF	50V	Ceramic	
	C360	QCY31HK-102	1000PF	50V	Ceramic	
	C361	QCS31HJ-101	100PF	50V	Ceramic	
	C362	QCS31HJ-101	100PF	50V	Ceramic	
	C363	QCS31HJ-101	100PF	50V	Ceramic	
	C364	QCF31HP-223	0.022MF	50V	Ceramic	
	C365	QETC1AM-476	47MF	10V	Electro	
	C366	QETC1AM-476	47MF	10V	Electro	
	C367	QETC1AM-476	47MF	10V	Electro	
	C368	QETC1AM-227	220MF	10V	Electro	
	C369	QCS31HJ-220	22PF	50V	Ceramic	
	C371	QETB1AM-108	1000MF	10V	Electro	
	C372	QETB1AM-108	1000MF	10V	Electro	
	C373	QETC1AM-476	47MF	10V	Electro	
	C375	QETB1CM-108	1000MF	16V	Electro	
	C376	QETB1CM-477	470MF	16V	Electro	
	C379	QCF31HP-223	0.022MF	50V	Ceramic	

Resistors

⚠	Item No.	Part Number	Description			Areas
⚠	R314	QRZ0062-680	68		Fusible	B
⚠	R314	QRZ0062-680	68		Fusible	C
⚠	R314	QRZ0062-680	68		Fusible	D
⚠	R314	QRD145J-680S	68	1/4W	Carbon	A
⚠	R315	QRZ0062-680	68		Fusible	B
⚠	R315	QRZ0062-680	68		Fusible	C
⚠	R315	QRZ0062-680	68		Fusible	D
⚠	R315	QRD145J-680S	68	1/4W	Carbon	A
⚠	R316	QRZ0062-680	68		Fusible	B
⚠	R316	QRZ0062-680	68		Fusible	C
⚠	R316	QRZ0062-680	68		Fusible	D
⚠	R316	QRD145J-680S	68	1/4W	Carbon	A
⚠	R317	QRZ0062-680	68		Fusible	B
⚠	R317	QRZ0062-680	68		Fusible	C
⚠	R317	QRZ0062-680	68		Fusible	D
⚠	R317	QRD145J-680S	68	1/4W	Carbon	A
⚠	R318	QRZ0062-680	68		Fusible	B
⚠	R318	QRZ0062-680	68		Fusible	C
⚠	R318	QRZ0062-680	68		Fusible	B
⚠	R318	QRD145J-680S	68	1/4W	Carbon	A
⚠	R319	QRZ0062-680	68		Fusible	B
⚠	R319	QRZ0062-680	68		Fusible	C
⚠	R319	QRZ0062-680	68		Fusible	D
⚠	R319	QRD145J-680S	68	1/4W	Carbon	A
	R321	QRD141J-222S	2.2K	1/4W	Carbon	
	R322	QRD141J-222S	2.2K	1/4W	Carbon	
	R323	QRD141J-682S	6.8K	1/4W	Carbon	
	R324	QRD141J-822S	8.2K	1/4W	Carbon	
	R325	QRD141J-102S	1K	1/4W	Carbon	
	R326	QRD141J-681S	680	1/4W	Carbon	
	R327	QRD141J-681S	680	1/4W	Carbon	
	R328	QRD141J-681S	680	1/4W	Carbon	
	R329	QRD141J-471S	47	1/4W	Carbon	
	R331	QRD141J-104S	100K	1/4W	Carbon	
	R332	QRD141J-104S	100K	1/4W	Carbon	
	R333	QRD141J-104S	100K	1/4W	Carbon	
	R334	QRD141J-103S	10K	1/4W	Carbon	
	R335	QRD141J-103S	10K	1/4W	Carbon	
	R336	QRD141J-103S	10K	1/4W	Carbon	
	R337	QRD141J-225S	2.2M	1/4W	Carbon	
	R338	QRD141J-104S	100K	1/4W	Carbon	
	R339	QRD141J-104S	100K	1/4W	Carbon	
	R340	QRD141J-473S	47K	1/4W	Carbon	
	R341	QRD141J-104S	100K	1/4W	Carbon	
	R342	QRD141J-103S	10K	1/4W	Carbon	
	R343	QRD141J-103S	10K	1/4W	Carbon	
	R344	QRD141J-103S	10K	1/4W	Carbon	
	R345	QRD141J-104S	100K	1/4W	Carbon	
	R346	QRD141J-104S	100K	1/4W	Carbon	
	R347	QRD141J-104S	100K	1/4W	Carbon	
	R348	QRD141J-104S	100K	1/4W	Carbon	
	R349	QRD141J-104S	100K	1/4W	Carbon	
	R350	QRD141J-103S	10K	1/4W	Carbon	
	R351	QRD141J-102S	1K	1/4W	Carbon	
	R352	QRD141J-102S	1K	1/4W	Carbon	
	R353	QRD141J-474S	470K	1/4W	Carbon	
	R354	QRD141J-474S	470K	1/4W	Carbon	
	R355	QRD141J-474S	470K	1/4W	Carbon	
	R356	QRD141J-474S	470K	1/4W	Carbon	
	R357	QRD141J-102S	1K	1/4W	Carbon	
	R358	QRD141J-102S	1K	1/4W	Carbon	
	R359	QRD141J-472S	4.7K	1/4W	Carbon	
	R360	QRD141J-472S	4.7K	1/4W	Carbon	
	R361	QRD141J-104S	100K	1/4W	Carbon	
	R362	QRD141J-103S	10K	1/4W	Carbon	
	R363	QRD141J-103S	10K	1/4W	Carbon	
	R364	QRD141J-103S	10K	1/4W	Carbon	
	R365	QRD141J-225S	2.2M	1/4W	Carbon	
	R366	QRD141J-750S	75	1/4W	Carbon	
	R367	QRD141J-750S	75	1/4W	Carbon	

⚠ Safety Parts

Resistors-(2)

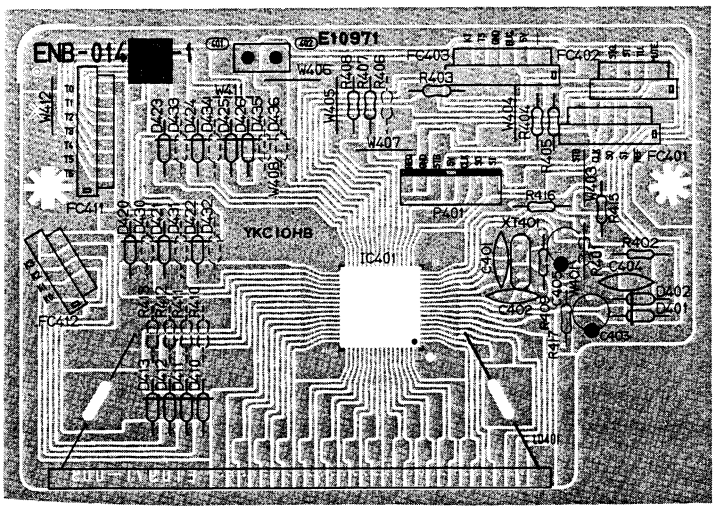
⚠	Item No.	Part Number	Description			Areas
	R368	QRD141J-750S	75	1/4W	Carbon	
	R369	QRD141J-820S	82	1/4W	Carbon	
	R370	QRD141J-820S	82	1/4W	Carbon	
	R371	QRD141J-820S	82	1/4W	Carbon	
	R372	QRD141J-563S	56K	1/4W	Carbon	
	R373	QRD141J-563S	56K	1/4W	Carbon	
	R374	QRD141J-563S	56K	1/4W	Carbon	
	R375	QRD141J-563S	56K	1/4W	Carbon	
	R376	QRD141J-563S	56K	1/4W	Carbon	
	R377	QRD141J-563S	56K	1/4W	Carbon	
	R378	QRD141J-102S	1K	1/4W	Carbon	
	R379	QRD141J-102S	1K	1/4W	Carbon	
	R380	QRD141J-102S	1K	1/4W	Carbon	
	R381	QRD141J-563S	56K	1/4W	Carbon	
	R382	QRD141J-333S	33K	1/4W	Carbon	
	R383	QRD141J-471S	470	1/4W	Carbon	
	R384	QRD141J-561S	560	1/4W	Carbon	
	R385	QRD141J-152S	1.5K	1/4W	Carbon	
	R386	QRD141J-332S	3.3K	1/4W	Carbon	
	R387	QRD141J-683S	68K	1/4W	Carbon	
	R388	QRD141J-473S	47K	1/4W	Carbon	
	R389	QRD141J-332S	3.3K	1/4W	Carbon	
	R390	QRD141J-102S	1K	1/4W	Carbon	
	R391	QRD141J-102S	1K	1/4W	Carbon	
	R392	QRD141J-390S	39	1/4W	Carbon	
	R393	QRD141J-221S	220	1/4W	Carbon	
	R394	QRD141J-330S	33	1/4W	Carbon	
	R395	QRD141J-153S	15K	1/4W	Carbon	
	R396	QRD141J-103S	10K	1/4W	Carbon	
	R397	QRD141J-221S	220	1/4W	Carbon	
	R398	QRD141J-270S	27	1/4W	Carbon	
	R421	QRD141J-123S	12K	1/4W	Carbon	
	R422	QRD141J-123S	12K	1/4W	Carbon	
	R423	QRD141J-103S	10K	1/4W	Carbon	

Others

⚠	Item No.	Part Number	Description	Areas
		E11090-002	Circuit Board	
	J301	EMN00TV-405A	4P Pin Jack	
	J302	EMN00TV-602A	Pin Jack Ass'y	
	J303	EMN00TV-602A	Pin Jack Ass'y	
	J304	EMN00TV-602A	Pin Jack Ass'y	
	P301	E04365-005	F.W. Socket	
	P302	E04365-003	3P Socket	
	P503	E04365-003	3P Socket	
	SW301	ESP0001-007N	Push Switch	
	SW302	ESP0001-007N	Push Switch	
	SW303	ESP0001-007N	Push Switch	
	SW304	ESP0001-007N	Push Switch	
	SW305	ESP0001-007N	Push Switch	
	SW306	ESP0001-007N	Push Switch	
	SW307	ESP0001-007N	Push Switch	
	SW308	ESP0001-007N	Push Switch	
	SW309	ESP0001-007N	Push Switch	
	SW310	ESP0001-007N	Push Switch	
	SW311	ESP0001-007N	Push Switch	
	SW312	ESP0001-007N	Push Switch	
	SW313	ESP0001-007N	Push Switch	
	SW314	ESP0001-007N	Push Switch	
	SW315	ESP0001-007N	Push Switch	
	SW316	ESP0001-007N	Push Switch	
	SW317	ESP0001-007N	Push Switch	
	SW318	ESP0001-007N	Push Switch	
	SW319	ESP0001-007N	Push Switch	
	SW320	ESP0001-007N	Push Switch	
	SW321	ESP0001-007N	Push Switch	
	SW322	ESP0001-007N	Push Switch	
	SW323	ESP0001-007N	Push Switch	
	SW324	ESP0001-007N	Push Switch	
	SW325	ESP0001-007N	Push Switch	
	SW326	ESP0001-007N	Push Switch	
	SW327	ESP0001-007N	Push Switch	
	SW328	ESP0001-007N	Push Switch	
	SW329	ESP0001-007N	Push Switch	
	SW330	ESP0001-007N	Push Switch	
	SW331	ESP0001-007N	Push Switch	
	SW332	ESP0001-007N	Push Switch	
	SW333	ESP0001-007N	Push Switch	D

3-(3) ENB-014 □ Tuner Control & Display P.C. Board Ass'y

Note: ENB-014 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

P.C. Board Ass'y	Designated Areas
ENB-014 [E]	U.S.A., Canada
ENB-014 [F]	U.S. Military Market & Other Countries
ENB-014 [G]	Europe, Australia West Germany
ENB-014 [H]	Europe, U.K.

ICs

⚠	Item No.	Part Number	Description	Maker	Areas
	IC401	TC9302F-002		Toshiba	

Diodes

⚠	Item No.	Part Number	Description	Maker	Areas
	D401	1S2473	Silicon		
	D402	1S2473	Silicon		
	D410	1S2473	Silicon		
	D411	1S2473	Silicon		
	D412	1S2473	Silicon		
	D413	1S2473	Silicon		
	D420	1S2473	Silicon		
	D421	1S2473	Silicon		
	D422	1S2473	Silicon		
	D423	1S2473	Silicon		
	D424	1S2473	Silicon		
	D425	1S2473	Silicon		
	D426	1S2473	Silicon		
	D430	1S2473	Silicon		F
	D430	1S2473	Silicon		G
	D430	1S2473	Silicon		H
	D431	1S2473	Silicon		E
	D434	1S2473	Silicon		E
	D434	1S2473	Silicon		F
	D435	1S2473	Silicon		F
	D435	1S2473	Silicon		G
	D435	1S2473	Silicon		H
	D436	1S2473	Silicon		H

Capacitors

⚠	Item No.	Part Number	Description			Areas
	C401	QCS31HJ-120	12PF	50V	Ceramic	
	C402	QCS31HJ-120	12PF	50V	Ceramic	
	C403	QETC0JM-477	470MF	6.3V	Electro	
	C404	QCF31HP-223	0.022MF	50V	Ceramic	
	C405	QET51HM-475	4.7MF	50V	Electro	

Resistors

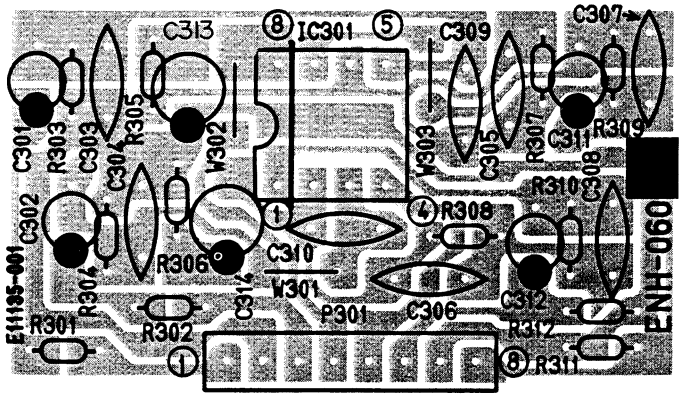
⚠	Item No.	Part Number	Description			Areas
	R402	QRD141J-104S	100K	1/4W	Carbon	
	R403	QRD141J-222S	2.2K	1/4W	Carbon	
	R404	QRD141J-332S	3.3K	1/4W	Carbon	
	R405	QRD141J-103S	10K	1/4W	Carbon	
	R406	QRD141J-104S	100K	1/4W	Carbon	
	R407	QRD141J-104S	100K	1/4W	Carbon	
	R408	QRD141J-104S	100K	1/4W	Carbon	
	R409	QRD141J-333S	33K	1/4W	Carbon	
	R410	QRD141J-104S	100K	1/4W	Carbon	
	R411	QRD141J-104S	100K	1/4W	Carbon	
	R412	QRD141J-104S	100K	1/4W	Carbon	
	R413	QRD141J-104S	100K	1/4W	Carbon	
	R415	QRD141J-103S	10K	1/4W	Carbon	
	R416	QRD141J-473S	47K	1/4W	Carbon	
	R417	QRD141J-102S	1K	1/4W	Carbon	

Others

⚠	Item No.	Part Number	Description	Areas
		ELU0002-004	L.C.D. Panel	
		E67764-002	Terminal Ass'y	E
		E67910-001	Spacer	
	P401	QMV5005-007	7P Plug Ass'y	
	FC401	E04365-005	F.W. Socket	
	FC402	E04365-004	Jamper Socket	
	FC403	E0365-006	6P Connector	H
	FC403	E04365-004	Jamper Socket	E
	FC403	E04365-004	Jamper Socket	F
	FC403	E04365-004	Jamper Socket	G
	FC411	E04365-007	F.W. Socket	
	FC412	E04365-004	Jamper Socket	
	XT401	ECX0007-200KC	Crystal	

3-(6) ENH-060 □ Source Selector P.C. Board Ass'y

Note: ENH-060 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

P.C. Board Ass'y	Designated Areas
ENH-060 C	Except for West Germany
ENH-060 D	West Germany

⚠	Item No.	Part Number	Description		Areas
				Maker	
	IC301	NJM4558D-D	IC	J.R.C.	

Capacitors

⚠	Item No.	Part Number	Description			Areas
	C301	QETC1HM-475	4.7μF	50V	Electro	
	C302	QETC1HM-475	4.7μF	50V	Electro	
	C303	QCY31HK-101	100pF	50V	Ceramic	C
	C303	QCY31HK-471	470pF	50V	Ceramic	D
	C304	QCY31HK-101	100pF	50V	Ceramic	C
	C304	QCY31HK-471	470pF	50V	Ceramic	D
	C305	QCY31HK-182	1800pF	50V	Ceramic	
	C306	QCY31HK-182	1800pF	50V	Ceramic	
	C307	QCY31HK-682	6800pF	50V	Ceramic	
	C308	QCY31HK-682	6800pF	50V	Ceramic	
	C309	QCY31HK-101	100pF	50V	Ceramic	
	C310	QCY31HK-101	100pF	50V	Ceramic	
	C311	QETC1HK-475	4.7μF	50V	Electro	
	C312	QETC1HK-475	4.7μF	50V	Electro	
	C313	QETC1HK-476	0.47μF	50V	Electro	
	C314	QETCIAM-476	0.47μF	50V	Electro	

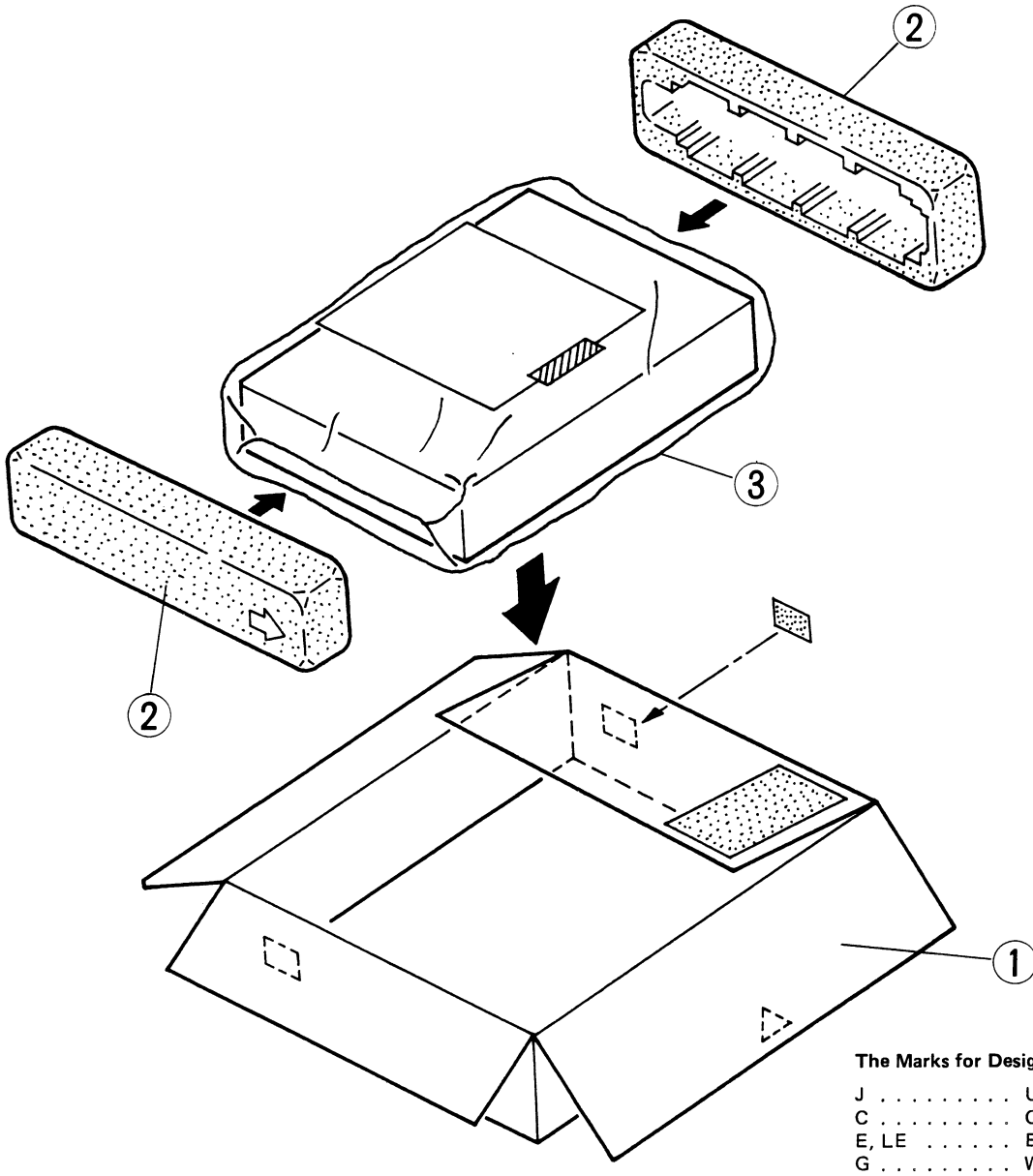
esistors

⚠	Item No.	Part Number		Description	Areas
	R301	QRD161J-222	2.2K	1/6W Carbon	
	R302	QRD161J-222	2.2K	1/6W Carbon	
	R303	QRD161J-473	47K	1/6W Carbon	
	R304	QRD161J-473	47K	1/6W Carbon	
	R305	QRD161J-621	620	1/6W Carbon	
	R306	QRD161J-621	620	1/6W Carbon	
	R307	QRD161J-393	39K	1/6W Carbon	
	R308	QRD161J-393	39K	1/6W Carbon	
	R309	QRD161J-475	470K	1/6W Carbon	
	R310	QRD161J-475	470K	1/6W Carbon	
	R311	QRD161J-104	100K	1/6W Carbon	
	R312	QRD161J-104	100K	1/6W Carbon	

Others

⚠	Item No.	Part Number	Description	Areas
	P301	EMV5101-0088	Plug Ass'y	
		E11135-001	Circuit Board	

4. Packing Materials and Part Numbers



The Marks for Designated Areas.

J . . . . . U.S.A.
C . . . . . Canada
E, LE . . . . . Europe
G . . . . . West Germany
A . . . . . Australia
P, PG . . . . . U.S. Military Market
LBS . . . . . U.K.
U . . . . . Other Countries
No mark indicates all Areas.

⚠	No.	Part Number	Part Name	Q'ty	Description	Areas
	1	PK-RX330VBE	Packing Case	1	E300382-558	J, C, P, PG, E, A, G, U
		PK-RX330VBLE			E300382-559	LE, LBS
	2	NZ-RX330VBE	Packing Pad	1		
	3	E34033-017	Envelope	1		J, C, P, PG, E, A, G, LE, U
		E34033-017B	Envelope	1		LBS

5. Accessories List

⚠	Part Number	Part Name	Description	Areas
	E30580-1225A	Instruction Book		Except BS
	E30580-1225ABS	Instruction Book		BS only
	E41202-2	Envelope		Except BS
	E41202-2B	Envelope		BS only
	EQB4001-008	Loop Antenna Coil		
⚠	E04056	Siemens Plug		U, PG
	BT20048B	Warranty Card		J, P, PG
	BT20025H	Warranty Card		C
	BT20029C	Warranty Card		A
	BT20064	Warranty Card		G
	BT20060	Warranty Card		BS
	BT20066	EEC Agency		G
	BT20046B	Service Information Card		J
	BT20071	Service Center		C
	BT20044D	Safety Instruction		J
	BT20054-009A	FTZ Information Sheet		G
	E6581-4	Envelope		U, P, PG
	E66416-003	Envelope		J
	E03614-004	Built-in-Antenna		J, C, U, P, PG, E, A, BS
	E67007-001	Wire Antenna Ass'y		G
	EQB4001-008	Bar Antenna Coil		
	UM-3(DJ)-2P	Battery		
	E6581-4	Envelope		
⚠	QMF51A2-2ROS	Fuse		P
⚠	QMF51A2-4ROS	Fuse		PG, U

⚠Safety Parts

The Marks for Designated Areas.

J . . . . . U.S.A.
C . . . . . Canada
E, LE . . . . . Europe
G . . . . . West Germany
A . . . . . Australia
P, PG . . . . . U.S. Military Market
LBS . . . . . U.K.
U . . . . . Other Countries

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